



Market Study

<u>OPPORTUNITIES IN OFFSHORE</u> <u>WIND ENERGY IN POLAND</u>

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1. INTRODUCTION

As the European Union seeks climate neutrality by 2030, Poland is starting to align itself with this initiative by becoming involved in the renewable energy sector, particularly in offshore wind. To begin with, the Baltic Sea in the north of Poland is said to be an attractive location for offshore wind farms.

Until recently Poland was not the best student of the class in this sector, one reason could be Poland's dependency on fossil fuels as its main source of energy. In 2018 alone, Poland used 171 TWh of coal (PSEW, 2019). However, this has begun to change as the Polish government has become involved in transitioning towards clean energy with its <u>PEP2040</u> campaign.

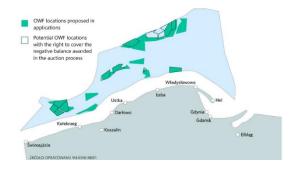
Currently, regarding wind power, last year, Poland had the lowest average electricity price among all EU countries (PSEW, 2023). To continue their path towards climate neutrality, offshore wind energy is seen as the new domain. In fact, 80% of citizens think electricity from offshore wind farms can contribute to counteracting climate change (PSEW, 2019).

The purpose of this market insight is to understand how the Polish wind energy market is growing. To understand the market, it is important to review requirements for companies seeking to enter the market, be familiarized with ongoing projects before submitting proposals, and how to become involved in these projects. By being aware of what the Polish market entails, we hope you can see the growing opportunities.

2. APPLYING FOR AN OFFSHORE WIND PROJECT

Offshore wind energy is a relatively new sector in Poland, often overlooked for investment in the past. However, it gained attention after the Polish government adopted the <u>Act of 17 December</u> 2020 to promote energy production in offshore wind farms to increase activity of renewable energy in the Baltic Sea, in accordance with EU regulations. This initiative is an economic boost, with new jobs and up to 60 billion PLN contributed into the country's GDP by 2030 (PSEW, 2019). Since the passage of the Act, Poland has nine offshore wind projects, either with permits issued or pending, with planned operation dates as early as 2026. To understand how the Polish offshore wind market operates, first, it is important to learn about the necessary permit needed.

Before a project is considered, a company must first obtain a location permit. The permit determines where the offshore wind farms can be built with restrictions. Although there are less restrictions than for onshore wind farms in Poland, which abide to the Distance Law, offshore winds adhere to the Maritime Spatial Plan (PSEW, 2023). The <u>Maritime Spatial Plan</u> permits for any activities to be done in Polish internal sea waters, territorial sea, and the Exclusive Economic Zone. The map below shows where projects are to be built or proposed in accordance with this plan.



Source: MarinePoland.com. "Navigating Regulatory Challenges in Poland's Offshore Wind Sector," 30 May 2023.

For perspective companies proposing offshore wind projects, the first step is to submit their application online via the <u>Ministry of Infrastructure's Bulletin of Public Information (BIP)</u>. The application for a location permit allows to build artificial islands, structures, and equipment in the exclusive economic zone (PSEW, 2023). While submitting, important information to include is the proposed location, the area of body of water intended for the execution and exploitation of the project, technical parameters, value of the project, and assessments of the economic, social and environmental impact. Afterwards, applications are reviewed by the Minister of Infrastructure, who determines which application can be the winner of a permit to qualify for the next phase—an auction.

The auction is for companies selected with a certificate of admission after success with their location permit application. Upon receiving the certificate, participants establish financial security with either a deposit of PLN 60 per 1 kW of the generated capacity or an equivalent bank or insurance guarantee. If no deposit is provided, then the financial institution must have an office or branch registered in the EU or EFTA member state, in addition, possess active credit ratings based on scores from Fitch, Moody's, and Standard & Poor's. Regarding documentation to validate the guarantee, for deposits only a bank transfer is sent to the Energy Regulatory Office, while, via a bank or insurance institution, additional information is necessary, which includes the duration of the guarantee and projects details. After successfully securing financial support participants are eligible for the auction.

The auctions are scheduled in advance by the President of the Energy Regulation Office, and each is held for the energy capacities of the proposed projects. The next auction is in 2025 for projects with capacity of up to 2.5 GW, followed by 2027, companies with volume capacity 2.5 GW, but with a caveat: if in 2025 winning bids did not exhaust their entire volume offered during the auction, then the difference increases the capacity. Similar rules apply for 2028, if volume offered in 2027 not entirely used and if unused capacity is at least 500 MW (PSEW, 2023).

Following the auctions, results are announced within 60 days, allowing winning bids to obtain a concession. A concession grants permission to generate energy following standard guidelines. They include the business must be registered or have its place of residency be in the EU or EFTA, financial security guaranteed, technical capacities, ability to hire workers, permits, and no debt in paying taxes towards the income of the state budget (PSEW, 2023). The concession is valid between 10 to 50 years, which during this period, the generator must inform the President of Energy Regulatory Office that investment aid is not being granted or provide value of the aid to recalculate the adjusted price. Additionally, a concession fee is paid, which is the only fee for offshore wind as they are exempt from paying property taxes. However, meeting the time frame

for first time energy generated is crucial to do with the concession by having to generate energy within 7 years. Failure to do so does not result in automatic withdrawal of support. Instead, the generator informs the Energy Regulatory Office about attempting to cover the negative balance no later than 12 months before the expiration deadline. Within 24 months after, the generator must generate the valid amount of energy support. Failure to do so results in the loss of the deposit or financial guarantee (PSEW, 2023).

After permission is granted to generate energy, companies have the option to sign corporate power purchase agreements (cPPAs), which typically are for 5 to 15 years. While relatively new in the Polish market, cPPAs are considered due to growing demand for offshore wind energy. Businesses can choose between two types: physical or digital. Physical contracts are more commonly selected, as the generator commits to delivering the energy to the end customer, offering a safer option without any regulation pricing gaps. Additional options include near-site direct wire agreements, allowing for isolated power generation units to supply energy directly to specific customers, subject to approval from the President of the Polish Regulatory Office.

In summary, entering the Polish market entails meeting deadlines before projects can proceed for construction. However, the process is handled in a timely manner, considering the interest in offshore wind energy. Companies can consider submitting applications for location permits to have a chance to participate in upcoming auctions. The following section highlights planned projects in the Polish offshore wind market.

3. PROJECTS IN POLAND

As Poland develops in offshore wind energy, nine projects are in progress, with most being joint ventures between Polish and foreign energy companies. The most advanced project is <u>Baltic</u> <u>Power</u> by ORLEN, the largest fuel and energy company in Central Europe, in partnership with Canada's Northland Energy. Baltic Power secured all requirements to begin construction later this year. Expected to be a 1.2 GW wind farm covering an area approximately of 130 square kilometers with 76 turbines each generating 15 MW. This project is a great start for Poland's efforts to expand offshore wind capacity in the Exclusive Economic Zone, with a target of generating up to 5.9 GW by 2030.

In addition to ORLEN and Northland Energy, Polish Energy Group (PGE), Poland's largest power producing company, has partnered with Danish company Orsted to develop <u>The Baltica Offshore</u> <u>Wind Farm</u>. This set of projects, with a total capacity of up to 2.5GW, is expected to be operational between 2027 and 2030, aligning with PGE's mission towards climate neutrality by 2050.

Other key players in the market include, Polenergia and Equinor, who are collaborating on three offshore wind farms: <u>MFW Bałykt I, MFW Bałtyk II</u>, and <u>MFW Bałtyk II</u>. Although still in the early phases and awaiting final decisions on permits in the early months of 2024, these projects are expected to have capacities ranging from 1.4 GW to 1.5 GW, powering two million households with clean wind energy.

Furthermore, there are sole projects such as Ocean Winds' <u>BC-Wind</u>, expected to generate capacity of 399 MW, and RWE Renewables Poland's <u>F.E.W. Baltic II</u>, with a capacity of 350 MW, supplying energy to 450,000 households. While not as large as afore mentioned projects, these companies

are significantly contributing to Poland's transition to clean energy and the EU's climate neutrality by 2050, as well, helping the country reach its goal of generating up to 5.9 GW by 2030.

4. BECOME IN AN OFFSHORE WIND PROJECTS AS AN SME

With Poland having a plan of a target capacity by 2030, this should attract companies to establish plants that produce components needed for wind turbines. This alone can accelerate project schedules to operate.

Currently, there are over 100 Polish entities producing and constructing materials needed to build these offshore wind farms. (Portal Gov.pl) However, offshore wind being a new investment area, there are few producers that offer complete end products; instead sub-suppliers are relied upon (MKS, 2021). A solution to find producers is to encourage SMEs to join these projects. To garner interest, Polenergia and Equinor hosted a <u>Suppliers' Day event</u>, which had over 100 representatives from different sectors potentially finding their role in the supply chain for offshore wind projects. A similar event, <u>PGE and Orsted Suppliers Day</u>, was held to find potential suppliers for their projects, hosting about 450 people, including 70 business sessions for suppliers to discuss potential partnership opportunities. These events give companies greater insight into how they can become involved in the construction phase of projects.

Additional support SMEs seeking involvement in offshore wind projects are expected to receive is from the Polish government alone. In particular the Ministry of Energy, by providing guidance for businesses on the Polish offshore wind market. Support ranges from a website with information on trainings to assistance with financial support for co-funding, grants, loans, and bank and insurance guarantees for all companies involved (MKS, 2021).

Another method for businesses to be involved is through challenges. This approach was taken by Ocean Winds for their project by participating in <u>ELBE Eurocluster's challenge</u> to have a company develop a multi-task versatile Unmanned Autonomous Vehicle (UAV) to support offshore activities during the project's operation. The winner receives financial support from ELBE to develop their concept. Kacper Kostrzewa, Director of BC-Wind Project, Ocean Winds sees such an initiative as promoting international collaboration and facilitating networking for international recognition of such projects, research centers, and companies (Baltic Wind, 2024). In addition to contests or supplier days, such as one hosted by Ocean Winds, there needs to be more involvement from companies in various sectors to contribute to economic growth and promote companies to gain global recognition for their work and successful project implementation.

Additionally, there are also financial institutions to consider when seeking support. For example, the construction of Baltic Power is co-financed by the European Investment Bank (EIB), which granted a loan for up to \in 610 million. At the national level, Bank Gospodarstwa Krajowego (BGK), has allocated PLN 100 billion to support renewable energy sectors like offshore wind and has decided to co-finance alongside the EIB (EIB, 2023). In addition to these, Baltic Power alone has over 25 Polish and international financial institutions financing this project (OWP, 2023). With that in mind, while financial support is available, projects must first advance in their schedules to receive financing.

5. CONCLUSIONS

As of the end of 2023, Baltic Power, is the only project that has been fully financed. Inflation and supply chain disruptions have affected financial support for other projects, causing delays that could delay expected dates to enter the second phase. Nonetheless, there are no indicators suggesting that significant disruptions will occur, especially considering that there are auctions scheduled in the next few years. These auctions provide time for companies to further develop their projects, potentially sparking greater interest from public lenders or financial institutions to co-finance them. The Polish offshore wind market will still be interesting and will continue to develop.

6. TRADE FAIRS AND CONFERENCES

PWEA 2024 Conference

PWEA Conference | Konferencja PSEW / PWEA Conference

The most important conference of the wind energy sector. PWEA organizes various events and conferences focusing on wind energy, including offshore wind. These events often gather industry professionals, policymakers, and stakeholders to discuss developments in the wind energy sector, including offshore projects.

From 2024 onwards, this conference is merged with the International Conference OFFSHORE WIND – LOGISTICS & SUPPLIES as one conference

International Conference OFFSHORE WIND – LOGISTICS & SUPPLIES (last edition 2023) http://www.offshore-conference.pl/

Conferences focusing on offshore wind logistics and supplies would cover topics such as:

- Supply chain management: Discussions on optimizing the supply chain for offshore wind projects, including transportation, storage, and distribution of components.
- Logistics challenges: Exploration of logistical challenges specific to offshore wind projects, such as port infrastructure, vessel requirements, and offshore installation logistics. Innovations in logistics and supply chain: Presentations on innovative technologies and approaches aimed at improving efficiency and reducing costs in offshore wind logistics and supply chain operations.
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- Regulatory and policy considerations: Sessions addressing regulatory frameworks and policies impacting offshore wind logistics and supplies, including permitting processes, environmental regulations, and government incentives.
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During the last edition in 2023, Belgian companies Jan de Nul and Deme Group participated in panel discussions.

EDU Offshore Wind 2024

<u>Strona główna - EduOffshoreWind - Edukacyjne Targi Kariery</u>

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