BALTIC WIND.EU

Quarterly Country Report

POLAND/Q3 2023

“100 questions for Ocean Winds” – successful meeting for potential suppliers to offshore wind industry

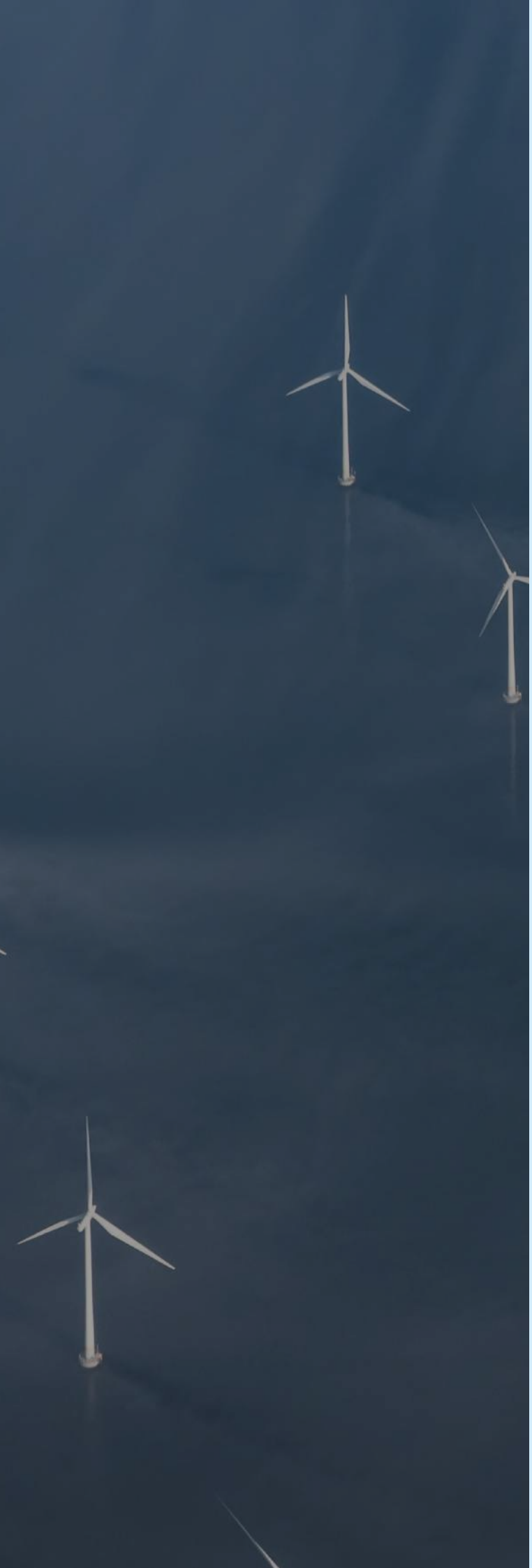
Sensoria - The Role of Fourth Industrial Revolution Technologies

Development Of Offshore Wind Farm Projects

Strategic partner:

SENSORIA
Wind Blade Monitor

Table of Contents



Dear Readers,

I am pleased to present you with another in a series of reports summarizing the Polish offshore wind market. In the third quarter of 2023, the topic of energy continued to be strongly linked to initiatives to accelerate decarbonization and the development of RES projects to strengthen energy security - European Union countries' response to Russia's war in Ukraine. The next step will be the so-called "Wind Package" announced this September by Ursula von der Leyen, President of the European Commission. The package's goals match the aim of accelerating the energy transition in EU countries, including by speeding up permitting, improving auction systems in member states and focusing on skills, access to financing and stable supply chains. In the report you will find industry reactions to the initiative.

In this publication, we continue to present information on the development of offshore wind farm projects in Poland under Phase I. We recommend paying special attention to information about another Supplier Day for the BC-Wind project, which we had the pleasure of organizing for Ocean Winds. The very high interest in the event, held in Gdansk, showed how important of a role a dialogue with potential suppliers plays. It effectively contributes to building the local supply chain and strengthening competencies.

In the following section, we take a closer look at the most important developments that affect the offshore wind energy sector. In this, we point out administrative decisions related to location settlements within the framework of Phase II of the Polish offshore.

I encourage you to read on!

Paweł Wróbel
Managing Director, BalticWind.EU

REGULATORY

President von der Leyen is right: wind energy must continue to be made in Europe

European Commission President Ursula von der Leyen; Photo: European Commission

On September 13, European Commission President Ursula von der Leyen delivered her annual State of the European Union speech. As she addressed the EU Green Deal, the President stressed that the wind industry, so central to its delivery, was facing a unique set of challenges. To address these challenges, President von der Leyen announced a new 'Wind Power Package'. And concluded: "The future of our clean tech industry has to be made in Europe".

This is very welcome. The European wind energy supply chain is struggling. Unless we change our policies, we could lose European manufacturing. The EU and Governments have set ambitious targets – 420 GW of wind energy by 2030. But the reality in the wind industry does not reflect this ambition. And the struggles of the European wind supply chain mean Chinese turbine manufacturers are now starting to win orders here. They offer cheaper turbines, looser standards and unconventional financial terms. There is a very real risk that the expansion of wind energy will be made in China, not in Europe. So new measures from the EU Commission cannot come soon enough.

The EU Commission's European Wind Power Package aims to:

1. fast-track permitting more than current legislation already does,
2. improve auction systems in Member States, and
3. focus on skills, access to finance and stable supply chains.

Each of these points is critical. Permitting remains one of the biggest bottlenecks for a fast expansion of wind energy. Around 80 GW of wind projects are still stuck in bureaucratic processes all around Europe. The EU has already introduced good new rules this year that will help speeding it up. But it cannot be stressed enough that without quicker permitting at national level we won't reach our European targets.

Auctions need to improve too. Member States have been organising auctions that undermine the health of the European wind supply chain. Some countries even make developers pay to build wind farms. The costs from this so-called negative bidding in auctions have to be passed on – to consumers, or to an already struggling supply chain. Other countries have failed to factor in inflation in their auction frameworks, leading to undersubscribed auctions. Overall, the industry suffers from these badly designed auctions.
Most countries' auctions are largely based on price. This needs to change. It has led to a race to the bottom. This can be avoided by applying pre-qualification and non-price criteria in auctions. These criteria reward the European wind industry's wider societal value. That European turbines do not pose a cybersecurity threat, that they are made meeting European labour standards, and help balance the grid. The Net-Zero Industry Act (NZIA) will help embed these principles in auctions, but it may come too late. It is important that Governments apply this as soon as possible.

President von der Leyen called the wind industry "a European success story". But wind can become an even bigger success story for Europe. Many more workers will be needed to build wind farms – translating into at least 200,000 extra jobs by 2030 and billions of investments in individual EU countries. But there is a lack of workers with the right profile at the moment. So it great the EU Commission wants to have a bigger focus on skills too.

WindEurope CEO Giles Dickson said: "It's very good the Commission are going to do this. It can't come soon enough given the crisis our industry is facing now. And the President is absolutely right: it is essential that wind energy continues to be made in Europe."

Source: WindEurope

PROJECT

"100 Questions for Ocean Winds" - A successful meeting for potential suppliers to offshore wind industry

September 13, 2023. Ocean Winds (OW), one of the global leaders in the offshore wind industry, held another open Suppliers Day meeting for their BC-Wind project, targeted to Polish and foreign companies interested in supplying services and components in the offshore industry.

The "100 questions to OW" formula of the meeting worked excellently - OW representatives answered specific questions from potential suppliers on a number of issues such as the timetable for the implementation of investments or the rules of the procurement process. During these talks, Ocean Winds representatives presented the current status of the investment, procurement plans for 2023-2024, requirements that the company places on contractors in the areas of health, safety and environmental protection, as well as its approach to innovation and cooperation with Władysławowo as the site of the service base for BC-Wind.

- We see the meeting with contractors as an important element of the company's consistently implemented development strategy in Poland. We discussed contracting plans for this year and next, presented visualizations of the service port in Władysławowo and the onshore connection station in Choczewo. We also announced the decision to increase the farm's capacity by 101MW, which will allow more wind turbines to be installed at the BC-Wind farm. Currently at 500MW, depending on the turbine supplier, the company is considering the installation of 28 to 34 turbines - explained Kacper Kostrzewa, Director of BC-Wind, which is being implemented by Ocean Winds in Poland.

December 30, 2022. Ocean Winds submitted a relevant application to Polskie Sieci Elektroenergetyczne S.A. (Polish transmission system operator), which was supplemented on January 16 this year and the company received a decision on changes to the connection conditions on August 29. The amendment concerns the connection to the C-Wind grid forming the BC-Wind farm.

Service Base for BC-Wind in Władysławowo

BC-Wind is an offshore wind farm located about 23 kilometers north of the coast, at the height of the Krokowa and Choczewo municipalities in Pomorskie Voivodeship. Ocean Winds plans to begin commercial operations of the BC-Wind wind farm in 2027.

Ocean Winds experts answer questions from potential suppliers

The following are the answers of Ocean Winds representatives to questions raised during registration for the event and during the event. They provide a better understanding of the rules that operate in the market for suppliers of goods and services - not only for the BC-Wind project, but also for Ocean Winds' other investments around the world. The potential for cooperation is underlined by the fact that OW's portfolio currently includes 15 projects in the operational, development or construction phase with a total capacity of 16.6 GW in 7 geographic regions.

Procurement procedures
Construction Permit Design (CPD) – 2022/2023

Onshore SUB Construction Permit Design Onshore Substation	**Contract signed 2022**
Export Cable Construction Permit Design Offshore Export Cable	**Contract signed Q1 2023**
Offshore SUB Construction Permit Design Offshore Substation	**Contract signed Q3 2023**
„Umbrella" Construction Permit Design Wind Farm	**Contract signed Q3 2023**
O&M Port - Operation and Maintenance Port Concept & Construction	**Contract for concept design signed Q3 2023** **Construction contracting planned Q1 2024**

Procurement procedures
Main packages – 2022/2024

PACKAGE	CONTRACTING STAGE
Wind Turbine Generators Supply (WTG SUPPLY)	Final
Transport and Installation of Wind Turbine Generators (WTG T&I)	Final
Foundations Supply (FOU SUPPLY)	Initial
Transport and Installation of Foundations & Offshore Substation (FOU & OSS T&I)	Initial
Onshore Export Cable (ONSHORE EC)	Final
Inter-array Cables Supply (IAC SUPPLY)	Advanced
Transport and Installation of Inter-array Cables (IAC T&I)	Final
Offshore Substation – Engineering, Procurement, Construction, Installation (OFFSHORE SUBSTATION EPC)	Final
Offshore Export Cable – Engineering, Procurement, Construction, Installation (Offshore Export Cable EPCI)	Final
Onshore Substation - Engineering, Procurement, Construction, Installation (ONSHORE SUBSTATION EPCI)	Advanced

The listed ongoing tenders started in 2022.
The selection of Contractors is planned for Q4 2023 / Q2 2024.
Depending on the scope, the contracts will be negotiated in Q4 2023 / Q3 2024.

What are the quality requirements for aggregates?

We have made the decision to change the foundations to jacket and are currently in the process of analyzing how we will protect them. We are considering aggregates with a 60mm-180mm fraction, but we need to finish the analysis and check the conditions at our OWF sites. We are also considering using aggregates as a protection method for both inter-segment and export cables.

What are the criteria for corrosion protection, steel structure protection and fire protection?

We expect CX protection with high durability and systems life of 35 years, because that's the operational life we assume for the project. These are the protections as far as the above-water part is concerned. As for the underwater part, we are betting on IM4 with anodic protection. We are in the phase of analyzing what kind of anodes we plan to use in the project. We are considering both passive and active.

Our company deals with anodes for steel corrosion protection. Do you prequalify such suppliers, or will you leave it to steel structure manufacturers to purchase?

We are open to dialogue with suppliers. There is a question of economic calculation here. We are currently in the process of prequalifying suppliers for various components, including anodes. We would like to have these systems in larger project "packages," while we know the conditions in which the market operates. If a company is able to provide a system that is qualitatively acceptable to us, we are open to discussion and possible exclusion from a larger design package. We encourage direct contact and potential cooperation.

While building a local supply chain, is OW interested in establishing cooperation with Polish companies planning to expand their business to include maintenance of mechanical parts of wind turbines?

It is worth making it clear that we service not only the turbines themselves, but also other components such as offshore and onshore stations. We are open to cooperation with companies offering such services. We are considering using outside contractors for maintenance after the initial years, when maintenance is done by wind turbine manufacturers.

Do you plan to use precast concrete platforms in this or other future projects?

For this project, we have chosen jacket foundations and are not considering concrete platforms. However, other OW projects may consider such concrete solutions.

When is the FID expected and what is the latest acceptable start date for the project?

FID is planned for the end of next year and we do not see any threats to the deadline at this time. As for the latest date for commissioning the project from a regulatory perspective, it is 7 years after the final support decision. We don't have this decision yet, which means that this is rather far on the horizon. We plan to launch the project as soon as possible, with a planned commercialization date in 2027. We are not planning delays for today. But as with the FID, these deadlines may slip. In certain situations, it could be 2028. We are currently sticking to the schedule.

Recently, we have seen some delays in offshore wind farm projects due to the viability of project financing. Is there a risk of project closure or delay?
To answer briefly: no. Of course, OW like other offshore projects in Poland and around the world is feeling the pressure of the market. So far, our project is being developed on stable assumptions. Therefore, we do not see any threat or risk that the project will be discontinued or suspended.

How does the support mechanism in place in Poland act as a stabilizing factor compared to other projects in other markets?

The support mechanism in Poland is very similar to those in other markets. There are some important differences, but in general, the support mechanism in Poland acts as a stabilizing factor. In the first stage of the project, support was granted in a non-competitive manner. With regard to other projects, these systems are very different. Sometimes they are non-existent. In the case of the Polish system, in the second phase it will be an auction-based system.

What are the operating voltage levels on the turbines and where are the measurements taken?

Voltage levels from the low voltage are raised to 66 kilovolts and then transferred to the offshore substation to 220 kilovolts. It then goes to the onshore substation and is raised to 400 kilovolts. The procedure is as follows: testing done twice after installation. After the mechanical tests are accepted, one has to move on and conduct a 10-day operational test of each turbine. Then there are overall tests onshore at the PSE grid connection site.

Is a SCADA system being considered for the BCB project?

The so-called TOP SCADA system is present in our company in the corporate department. The SCADA system integrates all the projects that are in progress. That's why we don't need TOP SCADA in a broader scope. If any company would like to encourage us to make a different solution or modification, please contact us.

To what extent, besides blades, are composites used in projects?
To a small extent. Thinking about where we could potentially use such materials, the only thing that comes to mind is the grilles on the platform. But for the main structural components, we are not considering composites.

When will the tender for cable supply be issued and what is the contracting scheme? Supply only or Turnkey - supply and installation?
We will be launching the tender for cable supply - its final phase - in the coming weeks.

Do you intend to issue separate packages for offshore substation and foundation? If yes, what are the timelines?
The two scopes are separate, offshore substation and offshore substation foundation are different "packages". Both tenders are already underway.

Is it possible to know which are the bidders in the competition for the cable supply and installation today so we can approach them?
We cannot share such information.

Which are the supply packages to be tendered as per today?
The last tender we are organizing is for foundations, it is at the preliminary RFI stage.

Questions regarding ELBE Challenge: #1 Please confirm the scope of the project Jan 2024 - Dec 2024. #2 Is there a budget for pilot 2024 beyond ELBE 60kEUR?
Please follow our website and social media for further announcements regarding 2024 activities and plans.

Will the export cables utilize HVAC or HVDC technology?
HVAC (high voltage alternate current).

Who should I contact for innovation / digitization / supporting software at OW?
Stakeholders Manager Aleksandra Jampolska

What are the local content requirements for this project?
All the local content requirements are presented in our Supply Chain Plan available on the BC-Wind website.

What are the expected parameters of the turbines?
Power, blade span diameter. We are in the process of selecting a turbine supplier, we will provide exact parameters once the supplier is selected.

Regarding consultancy in Contract and Claims Management, do we anticipate any procurement within that scope for 2024?
Please register in our suppliers database as a first step.

We are a recruitment agency. What is the process for us to be invited for a tender?
We are very interested in having dialogue and offering our services.
Please register in our suppliers database as a first step.

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AMBEREXPO / GDAŃSK

2. EDUCATION CAREERS FAIR

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TECHNOLOGY

Sensoria: The Role of Fourth Industrial Revolution Technologies

12/09/2023

Valery Godinezazcuaga, Director at the Sensoria™ Center of Excellence

In a recent interview with BalticWind.eu, Valery Godinezazcuaga, Director at the Sensoria™ Center of Excellence, shed light on the pivotal role of the Fourth Industrial Revolution's technological advancements in accelerating wind farm development.

- If we put the development of wind energy in the context of the historic industrial revolutions, we can say that the modern basis of the wind industry was put in place during the Second Industrial Revolution, remarked Godinezazcuaga.

The wind energy sector has seen significant growth since the inception of the first megawatt-sized turbines during the Third Industrial Revolution. However, the current emphasis is on offshore wind generation, which demands further innovation in several crucial technologies. By adopting solutions like monitoring systems for wind turbine drive trains, non-destructive evaluation techniques for rotor blade inspections, and remotely operated vehicles for offshore turbines' underwater components from other industries, the wind energy sector has expedited its development.

The Fourth Industrial Revolution, marked by the integration of digital and physical realms, has introduced "Wind 4.0" to the industry. This concept aims to boost turbine reliability and energy output through cutting-edge technological solutions.

- The acceleration of wind farm development, especially offshore, will heavily depend on the technological advances of the Fourth Industrial Revolution, emphasized Godinezazcuaga.

However, challenges persist. The shift towards Wind 4.0 has led to the generation of vast amounts of data throughout a wind turbine's lifecycle.

- To me, one of the most essential technological bottlenecks is how to turn data into actionable information that can be used to improve the performance of wind turbines without affecting the machine's structural health, Godinezazcuaga pointed out.

Furthermore, Godinezazcuaga highlighted the importance of transferring solutions from industries like oil, gas, and traditional power utilities to the renewable sector. Such transfers, which include technologies developed for offshore oil rig construction now being used for offshore wind turbines, accelerate the wind industry's growth by avoiding the need to "reinvent the wheel."

In conclusion, as Europe moves towards green reindustrialization under the NetZero Industry Act, the technological advancements of the Fourth Industrial Revolution will play a crucial role in shaping the future of the wind energy sector, especially offshore wind farms.

Source: BalticWind.EU

TECHNOLOGY

Blades Europe 2023: Exploring the Horizon of Wind Technology with Sensoria

29/09/2023

Blades Europe 2023, a premier event in the wind energy sector, is set to unfold in Amsterdam on the 28th and 29th of November. This year, the event is in partnership with Sensoria by MISTRAS, a recognized name in the industry, promising a convergence of thought leaders and technical experts who will share valuable insights and experiences.

The event is poised to offer attendees a profound understanding of the challenges and opportunities within the wind power sector, providing strategies and tools to navigate them effectively. It is an opportunity to delve into the latest innovations in blade design, explore emerging technologies, and envision the future possibilities in wind energy.

With global environmental policies steering towards cleaner energy sources, wind turbines are witnessing substantial advancements in size and efficiency. Over the past year, a remarkable 77GW of new wind power capacity was integrated into power grids worldwide, elevating the total installed wind capacity to 906 GW, marking a 9% growth from the previous year.

However, the journey towards achieving global clean energy targets is fraught with challenges, particularly in blade design and maintenance. Blades Europe 2023 aims to be a platform where owner-operators can share experiences in blade operations and maintenance amidst evolving technologies and market pressures. It will serve as a benchmark for best practices in lifetime extension and a hub to find solutions to common concerns, fostering innovation and adoption of wind energy solutions.

On the first day, Sensoria will present a session focusing on the applications of Data Management, Data Analytics, and Artificial Intelligence (AI) for wind turbine blades, led by Dr. Obdulia Ley, Technical Support Manager at Sensoria™ by MISTRAS. AI, a term encompassing computer programs mimicking human thought processes, has significant implications in the wind industry. Dr. Ley will elucidate the taxonomy of AI, the prerequisites for applying various methodologies, and the constraints in its deployment.

The presentation will address major challenges and concerns related to the use of AI in the wind industry, discussing applications like wind forecasting, blade inspection, and maintenance planning. It will provide insights into the future of monitoring wind turbine blades, the pivotal role of analytics in decision-making, and the requirements for AI to aid maintenance planning.

This event is a must-attend for those keen on understanding the trajectory of the wind power sector and learning about the breakthroughs in blade design and the role of AI in shaping the future of wind energy.

Source: https://www.bladeseuropeforum.com

PROJECTS

Ørsted and PGE sign further key contracts for the Baltica Offshore Wind Farm

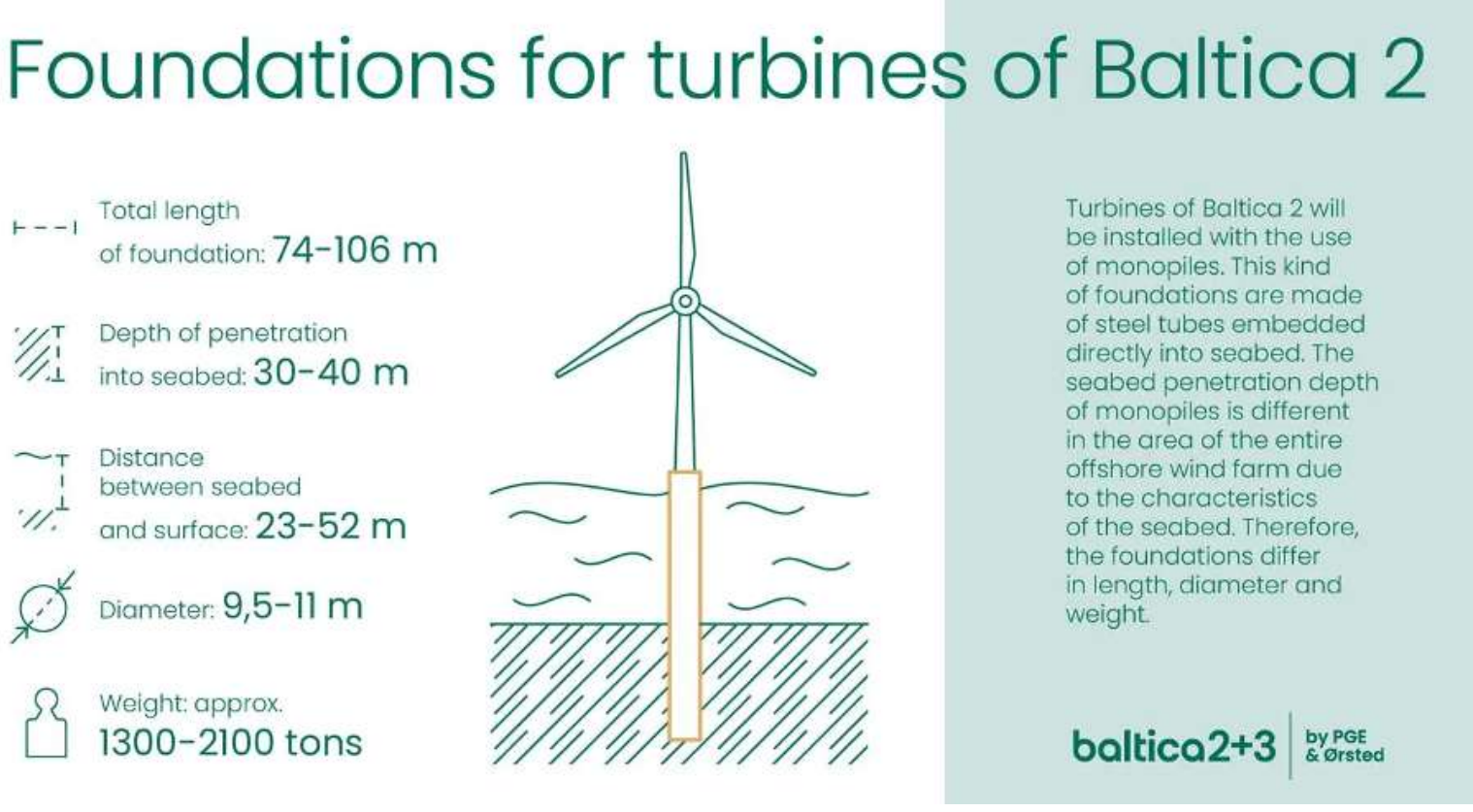
3/07/2023

Photo: Unsplash

PGE and Ørsted joint venture has signed contracts with Navantia-Windar and Orient Cable (NBO) for delivery of foundations and array cables for Baltica 2, which is the first stage of the Baltic Offshore Wind Farm.

"By signing contracts for the wind turbine generators for Baltica 2 earlier in April, we have started a series of agreements that are crucial for the development of the project. Securing components for Baltica 2 will allow us to continue with next phases of the project development. Our planned actions consistently bring us closer to achieving the strategic goal of the PGE Group which is developing of 2.5 GW in offshore wind capacity by 2030"said Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna.

"Ørsted has 30 years of experience developing, sourcing, constructing and operating offshore wind farms, and together with PGE we're committed to delivering offshore wind energy to Poland at large scale. By signing another two strategic component contracts for Baltica 2, we're step by step moving forward with this landmark project that will be pioneering offshore wind in Poland" said Agata Staniewska, managing director for Ørsted Offshore Poland.



In April, PGE and Ørsted reached an important milestone for their 1.5 GW Baltica 2 offshore wind farm by signing the project's first major component contract with wind turbine manufacturer Siemens Gamesa. Today, the joint venture announces the signing of the next two strategic supply chain contracts for Baltica 2: Navantia-Windar will be supplying monopile foundations, the largest exceeding 100 meters and weighing over 2,000 tons, while Orient Cable (NBO) will be delivering 170 kilometers of 66 kV subsea array cables that will be connecting the wind turbines to the offshore substations.

Subject to final investment decisions, Ørsted and PGE Baltica expect to complete the construction of Baltica 2 (1.5 GW) by the end of 2027, while Baltica 3 (1 GW) is expected to be fully operational no later than by the end of 2029. With a joint capacity of 2.5 GW the Baltica 2 and Baltica 3 will create the Baltica Offshore Wind Farm. It will contribute significantly to Poland's green energy transition, delivering clean energy for nearly four million households in Poland.

Source: PGE Baltica

EDUCATION

EDF Renewables Polska and training company Vulcan together with the SRK are beginning a multi-year cooperation

03/07/2023

The cooperation will prepare workers in the mining sector who are leaving the mines to work as wind turbine technicians and service technicians.

The "Wiatr – kopalnia możliwośc" ["Wind – a Mine of Opportunity"] program aims to help miners and other workers in the mining sector acquire skills and knowledge that will enable them to change careers and become competent in operating and servicing onshore wind farm installations.

EDF Renewables is looking at its presence in Poland on a long-term basis, which is why investments in competence and personnel development are the cornerstone of our company's operations. In addition, we believe that one of the most important elements of our business is working with local communities and taking actions that positively affect their quality of life. We want to be an active participant in a just transition and take care of the development of competencies of employees leaving Polish mines. – explains Alicja Chilińska-Zawadzka, president of EDF Renewables in Poland.

The training will equip employees in the mining sector with competencies that the labor market will expect over the next several decades.

The energy transition is a reality. We believe that it should be carried out in a way that takes into account the principles of social solidarity and justice. Our task – as the Polish government – is to provide attractive jobs for employees leaving the coal sector and to provide them with opportunities to develop their competencies so that they can take up employment in the area of new energy – says Marek Wesoły, Member of the Polish Parliament, Vice-Minister of State Assets, Government Plenipotentiary for the Transformation of Energy Companies and Coal Mining.The SRK will handle the recruitment process. Workers from mines slated for extinction will be qualified to attend the course.

I am glad that through this cooperation we can support the professional development of people who, after leaving the mines, may still be professionally active for many years to come. Acquiring new competencies will be a guarantee for them to receive job offers in the RES sector, which, according to PEP2040, will play an increasingly important role in Poland's energy mix – stresses Janusz Smolillo, president of the SRK.

The training program developed by the training company Vulcan Training & Consultancy complies with standards of the Global Wind Organization, the Office of Technical Inspection (UDT) and the Association of Polish Electrical Engineers. This means that those who pass the course will be able to work installing and servicing turbines not only in Poland, but around the world.

The course we offer meets all international standards. Miners will receive internationally recognized credentials issued by the Global Wind Organization unit. In addition to the practical part, the course also includes learning specialized phrases and issues in English and meeting with experts in the wind energy sector – explains Artur Ambroziewicz, CEO of Vulcan Training & Consultancy, which implements the training program for miners.

The training program was held under the patronage of Marek Wesoły – Deputy State Assets Minister, Jarosław Wieczorek – Governor of Silesia, Grzegorz Tobiszowski – Member of the European Parliament.

The first round of training is scheduled for fall 2023. Employees wishing to participate can apply directly to SRK's Human Resources and HR Policy Department tel. 32 432-10-38, 32 432-10-32, and through a form on the website wind-kopalniamozliwosci.pl. The training organizers have also set up a hotline for those interested in training at phone number: 693,673,050, open Monday through Friday from 8:00 am to 4:00 pm.

Source: EDF Renewables

REGULATORY

Deputy Minister Ireneusz Zyska at the Sixth Meeting of Offshore Wind Energy Coordinating Council

03/09/2023

Legislative actions taken by the Ministry of Climate and Environment for the development of offshore wind energy, as well as investments in power grids to derive power from offshore wind farms, were the issues discussed at the 6th meeting of the Offshore Wind Energy Coordinating Council. The meeting, held on June 30, 2023, was chaired by Ireneusz Zyska, Deputy Minister for Climate and Environment and Government Plenipotentiary for Renewable Energy.

The development of offshore wind energy is strategic for strengthening the country's energy security, but also for creating economic development momentum. As part of the activities of the sector agreement, solutions are being developed that will provide the conditions for building a strong supply chain, with a key role for industry and research centers. The first electricity from wind farms in the Baltic Sea will flow as early as 2026. In order to fully utilize energy from offshore wind farms, it is necessary to build transmission infrastructure, as well as an energy storage system and hydrogen electrolyzers – said Deputy Minister Ireneusz Zyska.

During the meeting, Maciej Przybylski, Director of Department of System Development, Polskie Sieci Elektroenergetyczne SA, gave a presentation on ongoing and planned power grid investments for offshore wind development.

The deputy minister also presented the effects of legislative work carried out at the Ministry of Climate and Environment for the development of offshore wind energy. He pointed out that the Law on Amendments to the Law on Renewable Energy Sources and certain other laws increased the ambitions for offshore wind installed capacity to a total of 18 GW.

At the same time, Ireneusz Zyska pointed out that in the assumptions for updating Poland's Energy Policy until 2040, in addition to the aforementioned increase in capacity for offshore wind projects, the need to expand the transmission grid in the northwestern part of the country has also been taken into account. This will create the conditions for the connection and derivation of this power.

He also recalled that in the Law on Amendments to the Energy Law and certain other laws adopted by the Polish Parliament on June 16, 2023, amendments to the Offshore Act have been included, responding to demands by manufacturers for provisions governing obligations for the materials and services supply chain plan and reporting on its implementation. In addition to extending the deadline for submitting the first report on the implementation of the materials and services supply chain plan from 6 to 18 months, the safeguarding of company-secret information in updates and reports submitted to the ERO President was also guaranteed.

Source: Ministry of Climate and Environment

PROJECTS

Cadeler enters Polish offshore wind market with the installation of 76 Vestas 15MW wind turbines

04/07/2023

Photo: Cadeler A/S

Cadeler has signed a firm contract with Baltic Power for the installation of 76 Vestas 15MW offshore wind turbines in the Polish Baltic Sea with a contract value of between 68-85 million EUR. The overall project will begin in 2024 and marks Cadeler's entry into a new and expanding offshore market.

Cadeler has signed a firm contract with Baltic Power to execute the transportation and installation of the full scope of 76 offshore wind turbines at the Baltic Power offshore wind farm. The overall project will start in 2024 and the WTG installation in 2025. The contract has a value of between 68-85 million EUR and is the final confirmation of a reservation agreement from July 2022 by Cadeler and Baltic Power, a joint venture project of ORLEN and Northland Power Inc. Vestas will provide the turbines and it will be one of the first times the new V236-15.0 MW model will be used on a commercial scale. When the wind farm is completed in 2026, it will have a capacity of up to 1.2 GW of renewable energy.

For this project, Cadeler will make use of one of the two O-class installation vessels, which by the time of the project execution will feature a new and upgraded crane with a lifting capacity of 1,600 metric tons at a radius of 40 metres.

The project is the first time Cadeler will operate in the Polish market, entering a brand-new market with ambitious plans for offshore wind.

The wind farm will be situated in the Baltic Sea, 23 kilometres North of the Polish coast, near Łeba. It will spread across more than 130 square kilometres.

Source: Cadeler

Helicopter on fire – the first fire training ground of this type in Poland

12/07/2023

Photo: Vulcan Training & Consulting

Vulcan Training & Consultancy (VTC) is building the first commercial fire training ground in Poland with a helicopter landing pad.

VTC announced the opening of a new and innovative fire training ground. This commercial facility, which is the only one of its kind in Poland and Central and Eastern Europe, will provide the highest quality training for members of firefighting teams on ships and offshore Oil & Gas installations.

"The most important element of the new training ground will be a full-size helideck, which served as an active helicopter landing pad on the ship. The Helideck was dismantled and transported to Szczecin so that the participants could experience the most authentic infrastructure. A helicopter simulator was placed on the helipad, designed by the VTC staff in such a way as to offer many fire scenarios." – says Łukasz Fajt, Managing Director @ Vulcan Training & Consultancy.

This is not the end of the simulators, the next one is a helicopter turned on its side, in which evacuation simulations from a crashed and overturned machine will take place. The Fire Field infrastructure will contain a wide range of fire scenarios, thanks to such equipped space, trainees will be able to train on a realistic landing site with real flames, in the most realistic fire scenarios. Another unique element of the fire training area will also be the former post-shipyard pumping station, which is an ideal place to conduct practical exercises. Students will have to deal with the difficulties of evacuating in challenging environments such as thick cosmetic smoke, a maze of pipes and valves, and the use of gas technology in a fire simulation.

The fire training ground in Szczecin will become an attractive place for specialists from all over the world who are looking for high-quality training and unique experiences.

The Fire Field fire training ground will be fully ready for training later this year. Celebrating the fifth anniversary of Vulcan Training & Consultancy on September 7, a demonstration of the training ground's capabilities will be held at the same time.

Source: Vulcan Training & Consultancy (VTC)

PROJECTS

PGE Baltica engages Polish entities in ichthyofauna research for Baltica 1 project

18/07/2023

One of key steps in the offshore investment process is the characterization of the natural environment. This is not possible without a series of studies of the area of the planned wind farm and connection infrastructure. This is an opportunity to engage with Polish entrepreneurs who can join the offshore supply chain. Such cooperation has been established with local fishermen.

– PGE Baltica, in implementing the Baltica 1 project, places great emphasis on involving Polish research institutions and companies in the development of offshore wind farm projects. We work with Polish entities with international experience, but also with local entrepreneurs who are involved in the maritime industry on a daily basis and have extensive knowledge of it – said Arkadiusz Sekściński, CEO of PGE Baltica. It is worth noting that the conduct of environmental studies for the Baltica 1 project has been entrusted to Polish contractors and subcontractors in 90%.

The main contractor for the study of ichthyofauna has engaged specialists from the National Marine Fisheries Research Institute– PIB in Gdynia, which cooperates with fishermen in its ongoing research.

Fish surveys are being conducted in the construction area of the planned Baltica 1 farm, along with the surrounding 4-kilometer-wide buffer, and along the corridor that will be used for the transmission cable that will deliver the produced energy to the mainland. Both fish living in the depths of the water (pelagic fish), such as herring and sprat, and fish living at the bottom (demersal fish), which include primarily flatfish and cod, but also some Baltic protected fish (demersal, gobies), are studied. Both adult species and their early life stages: larvae and eggs (ichthyoplankton) are studied.

– During the survey campaigns, conducted four times a year (spring, summer, autumn and winter), surveys are carried out to determine the species composition, abundance, distribution of all components of the ichthyofauna and the fishing efficiency of commercial species. Adult pelagic and demersal fish caught during the research work are subjected to ichthyological analysis allowing to determine their length, weight as well as sex, sexual maturity and the degree of stomach filling determining the intensity of feeding – said Dr. Eng. Tomasz Nermer, Deputy Head of the Logistics and Monitoring Department of the National Marine Fisheries Research Institute.

In the case of early life stages of fish (ichthyoplankton), the length of larvae is measured, which indirectly provides information on the period when reproduction of the species may have taken place.

Due to the peculiarities of the various components of ichthyofauna, different methods of data collection and fishing are used to study them. In the case of pelagic fish, echosounder is used to determine the distribution and surface density of biomass, supplemented by fishing in the depths of the water. Thanks to the catches, we can determine the species composition and proportion of the share of fish in length classes.

Demersal fish are caught using pond nets, which look like a “wall” or “curtain” floating in the depths of the water. As for ichthyoplankton, due to the very small size of these organisms, their catch is made with plankton nets with a mesh size of 0.3 mm.

In the coastal zone, where shallow depths prevent the use of vessels, fish surveys are conducted using nets that are dragged from more than a meter to shore.

Fishing boats from Ustka and Władysławowo involved in research

National Marine Fisheries Research Institute – PIB in Gdynia conducts the commissioned research, renting two fishing boats from Ustka and one boat based in Władysławowo.

The keelboats have been properly adapted and equipped for their new functions. For the duration of the study, the two units from Ustka were equipped to conduct measurements of salinityand seawater temperatures. In turn, a fishing echo sounder used for estimating fish stocks using hydroacoustic methods was additionally installed on the vessel from Wladyslawow.

– Establishing contact between fishing vessel owners and the investor can be the first step to further cooperation benefiting both local communities and offshore wind farm operators – added Arkadiusz Sekściński, CEO of PGE Baltica.

The results of the field survey combined with information available in the literature on the ichthyofauna of the Baltic Sea and an analysis of past fishing activity will help determine the conservation value of the area. The collected information will also be used to assess the suitability and use of the area as a feeding base for birds, due to the fact that the fish species present in the project area may provide a food base for them.

Baltica 1 with an installed capacity of approx. 0.9 GW is being implemented by the PGE Group and will come online after 2030. It is located about 80 kilometers from the Polish coast of the Baltic Sea, in the central shoal region. The project already has a location permit and a connection agreement. By implementing more offshore wind farm projects, the PGE Group intends to fulfill its strategic goal of achieving at least 6.5 GW of offshore generating capacity in the Baltic Sea by 2040.

Source: PGE Baltica

COOPERATION

PŻB Offshore and SeaZip Offshore Services Join Forces to Drive Offshore Wind Growth in Poland

18/07/2023

In a significant move towards advancing the offshore energy sector in Poland, Polish Baltic Shipping Group (Polferries) and SeaZip Offshore Services have recently signed a Consortium Agreement. This partnership comes after the successful signing of a Letter of Intent to Cooperate signed in Harlingen, Netherlands, solidifying their commitment to working together in the field of offshore wind energy.

The Consortium Agreement was signed by the respective presidents of the companies, Mr. Radoslaw Marciniak for PŻB Offshore and Mr. Jan Reier Arends for SeaZip Offshore Services. This collaboration is poised to open new horizons for both companies, propelling them into a flourishing era of international capabilities and mutual projects.

According to Mr. Jan Reier Arends, the managing owner of SeaZip Offshore Services, the primary aim of the partnership is to develop a service fleet that can cater to the burgeoning offshore projects in Poland while also engaging in collaborative ventures abroad. He expressed enthusiasm over the alliance, stating – "We are very pleased that this has resulted in a partnership with PŻB Offshore. By working together, we can realize our common goals and ambitions, and our mutual projects are very ambitious."

SeaZip Offshore Services, founded in 2010, is a Dutch offshore shipping company and a part of the renowned JR Shipping Group, which imparts it with a strong maritime background. The company's expertise in ship design, shipbuilding, and ship management has already earned them an impressive track record in the offshore wind market. Their fully certified ship management division ensures efficient and safe operations of their offshore service and support vessels.

On the other hand, PŻB Offshore is a subsidiary of Polish Baltic Shipping Group, also known as Polferries. The newly established Polish entity is wholly dedicated to participating in local offshore projects and actively engaging in mutual ventures with foreign partners.

"The dynamic development of the new company in our capital group is very pleasing. Offshore wind energy is an area where we see the potential to diversify our business" – commented Mr. Andrzej Madejski, the CEO of Polish Baltic Shipping Co.

Mr. Radosław Marciniak, President of the Management Board of PŻB Offshore, highlighted the significance of the partnership with SeaZip. He emphasized that the collaboration brings real and valuable assets to their local projects, benefiting not only the Polish Baltic Shipping Group but also the entire Polish maritime industry, particularly the developing sector of offshore wind energy. He referred to this alliance as a transformative opportunity for growth for both partners.

The Polish offshore energy market is rapidly expanding, presenting various opportunities for companies to contribute to sustainable energy development. By combining the strengths and expertise of PŻB Offshore and SeaZip Offshore Services, Poland can accelerate its transition towards cleaner energy solutions, reducing its reliance on traditional fossil fuels and fostering environmental stewardship.

EDUCATION

The 1st edition of “Education for sustainable development: offshore wind energy” postgraduate program ends

24/07/2023

The first edition of the postgraduate course “Education for sustainable development: offshore wind energy” conducted at the University of Gdańsk UG by the Center for Sustainable Development together with UG’s Research Centre for Marine Economy (Centrum Badań nad Gospodarką Morską) concluded with a ceremonial meeting of the study’s graduates with the Vice – Rector for Cooperation and Development, dr hab. Sylwia Mrozowska, Prof. UG, Director of the Center for Sustainable Development, PhD Krzysztof Szczepaniak, Director of the Research Centre for Marine Economy and Head of Postgraduate Studies Dr. Dorota Pyć, Prof. UG, as well as a representative of Polenergia, Paweł Mawduk, and Vice President of the Polish Offshore Wind Energy Society, Jakub Budzyński.

The meeting was held on 20.07.2023 at the UG Centre for Sustainable Development, and was held in a pleasant atmosphere. In short speeches there were many arguments justifying the necessity of interdisciplinary education in the field of renewable energy. It was emphasized that in Poland the significant benefits of the emerging offshore wind energy sector include the creation of new jobs, and representatives of various industries involved in offshore projects cooperating with the administration and stakeholders. For this cooperation to be effective, the so-called soft competencies of employees are important. Postgraduate studies conducted at the University of Gdańsk “Education for sustainable development: offshore wind energy” is the only study in Poland that is focused on building soft competencies in offshore.

– We are very happy that today, we can jointly celebrate the completion of the first edition of our studies. I hope that they have met your expectations. We continue to develop our offshore education offer at UG. We have organized the second edition of the OWE postgraduate program, and there will be others. We have established cooperation with, among others, Polenergia and the Polish Offshore Wind Energy Society – said the Vice – Rector for Cooperation and Development, dr hab. Sylwia Mrozowska, Prof. UG.

– The first edition of the MEW postgraduate program is unique and motivating for us lecturers because of your involvement. You asked various questions and shared your insights, which helped to create a truly creative atmosphere in the classes, for which I would like to thank you very much – said the Head of the program, dr hab. Dorota Pyć, Prof. UG.

Then, the Director of the Center for Sustainable Development, PhD Krzysztof Szczepaniak, congratulated the graduates on their graduation and noted the great importance of the offshore sector in the economic development of coastal regions. Meanwhile, Paweł Mawduk, Offshore Wind Project Manager at Polenergia, talked about the need to involve not only large companies, but also medium and small enterprises in offshore wind energy. Finally, Jakub Budzyński of the Polish Offshore Wind Energy Society drew attention to the dynamic development of the offshore sector and its huge demand for human capital – not only for people with science majors, but also for humanists.

Cover of a book with the same title as the postgraduate course, namely “Education for sustainable development: offshore wind energy”; Photo: University of Gdańsk

An exceptionally nice moment for the graduates was the presentation of a book bearing the same title as the postgraduate studies, namely “Education for sustainable development: offshore wind energy”. This is a special book, because it consisted of the theses of the students of the first edition of the study, in which their authors presented the results of their research and their own thoughts on offshore wind energy. The publication is evidence of good cooperation and communication between postgraduate students, academics and offshore wind power specialists from business.

The UG Center for Sustainable Development is implementing the Education for Sustainable Development program aimed at achieving the Sustainable Development Goals adopted by the United Nations in the document “Transforming Our World: The 2030 Agenda for Sustainable Development”. As part of the program, the first edition of thematic, interdisciplinary postgraduate courses on offshore wind energy (OWE) was launched at UG in March 2022. The study program includes, among others: law in offshore wind energy, management of offshore wind potential, safety and control of offshore wind power generation and maritime spatial planning, as well as offshore wind in the energy transition. In March 2023, the second edition of the postgraduate program was launched (https://czrug.ug.edu.pl/studia-podyplomowe/mew/). The next edition is scheduled to be launched in March 2024. We sincerely invite you to join us!

Source: University of Gdańsk

PROJECTS

Offshore wind energy caches wind in its sails

26/07/2023

Senate committees back Polish offshore. The assumed increase in the capacity of offshore wind farms from 5 to 12 GW, which will be built by 2030, is a landmark step towards the dynamic development of the new sector in Poland. Cooperation between business and government in this regard will be integral to success.

Committees on Budget and Public Finance and the Special Committee on Climate Affairs discussed, together with industry experts, the opportunities and threats facing investments in offshore wind farms. The implementation of the climate ministry's proposed regulations and the industry's recommendations will give a boost to all stakeholders, including the TSO, to further expand the grid in the north of the country and provide consumers with clean and affordable electricity.

The draft amendment to the Renewable Energy Act currently under consideration assumes an increase from 5 to 12 GW of offshore wind power capacity in Poland to be built by 2030. This is the change proposed by the Ministry of Climate and Environment to increase the share of renewables in national energy consumption. The draft has been approved by Sejm, and will be voted on by the Senate in the coming days.

New chapter for offshore in Poland

"Offshore wind energy is the most important energy target, regardless of the prevailing power", pointed out Chairman of the Special Commission for Climate Affairs, Stanisław Gawłowski.

Despite the fact that Poland does not yet generate energy from offshore wind farms, it has so far managed to set ambitious targets for OWE in PEP2040, enact an offshore development plan or pass a dedicated law promoting electricity generation from offshore farms – experts pointed out. Support was also granted for 7 Phase I projects with a total capacity of 5.9 GW, and 11 adjudication proceedings were conducted for Phase II projects with a total capacity of 5.8 GW.

Thanks to the planned new RES sources in the Baltic Sea, the expansion of the National Electricity System (by two additional substations dedicated to receiving energy from offshore wind power plants) has begun, and work on the installation port in Świnoujście has started. A starting point for extensive cooperation between the administration and business is also the sectoral agreement for offshore development, signed by more than 200 entities.

Opportunities and challenges

Simplification of administrative procedures, primarily in terms of issuing permits, has been defined as one of the biggest brakes on the sector's development.

"Realizing the potential of OWE as a large-scale renewable energy source will contribute to our country's independence and energy security. However, current processes should first be optimized to make permitting procedures as easy and quick as possible. Today, permitting procedures delay the development of the Polish offshore sector the most and prevent it from competing with developed, European markets", points out Janusz Gajowiecki, President of the Polish Wind Energy Association.

In addition to the removal of administrative regulation barriers, an important issue for the dynamic development of offshore wind power is the construction and modernization of the transmission infrastructure necessary to connect wind farms in the Baltic Sea. There is also a risk of limited fleet availability for OWE construction – insufficient number of vessels may become a "bottleneck" in the development of offshore wind farms in Poland.

Local content in the Polish offshore

The development of offshore wind farms represents an opportunity for the development of the local supply chain and the construction of a new, innovative sector of the economy. The realization of offshore wind potential will create and sustain thousands of innovative, well-paid jobs.

A representative of Equinor stressed the importance of a service port in Łeba.

"Our service base will be established there, which will serve wind farms built in the Baltic for decades to come. It will employ about 100 people, which is an opportunity for the economic development of the region and the revival of the local labor market". The investor also pointed to the sector's main challenges related to offshore wind investments. "In Poland, we see risks similar to those faced by the entire global market, i.e. price pressure in the supply chain, resulting from the macroeconomic situation, the multiplicity of ongoing and planned investments and limited availability of suppliers, as well as regulatory risks, related to the interpretation of regulations when issuing various types of permits", stressed Michał Kołodziejczyk, Equinor.

A representative of the Baltic Power project, which is currently the most advanced offshore wind farm project in Poland, noted that the main suppliers for this investment have already been selected to carry it out. Out of 12 entities, 3 of them are large Polish companies.

PGE, as one of the leaders in the settlement of Phase II of offshore, obtaining 5 of the 11 sites made available, stresses that in its Baltica 2 and Baltica 3 projects, it cares about the maximum involvement of Polish companies. The investor supports increasing the total capacity of offshore wind farms (from 5GW to 12GW) that can be supported by the differential contract formula through auctions, which will enable the realization of more offshore wind farms with higher capacity volumes.
Senate's extensive debate on the implementation of such large and complex investment projects shows that there are areas that need to be optimized so that first Polish wind farms in the Baltic can be efficiently and effectively built. Past experience and examples from other markets show that changes are needed.

Source: PWEA

COOPERATION

Grupa Przemysłowa Baltic confirmed ability to build fully equipped service vessels in cooperation with Petrobaltic

25/07/2023

On 20.07.2023 in Gdańsk, at the headquarters of the Grupa Przemysłowa Baltic (GPD) a meeting was held with the participation of: GPB, Baltic Operator and Petrobaltic – Orlen Group on the construction of service vessels for the operation of offshore wind farms in the Baltic and beyond.

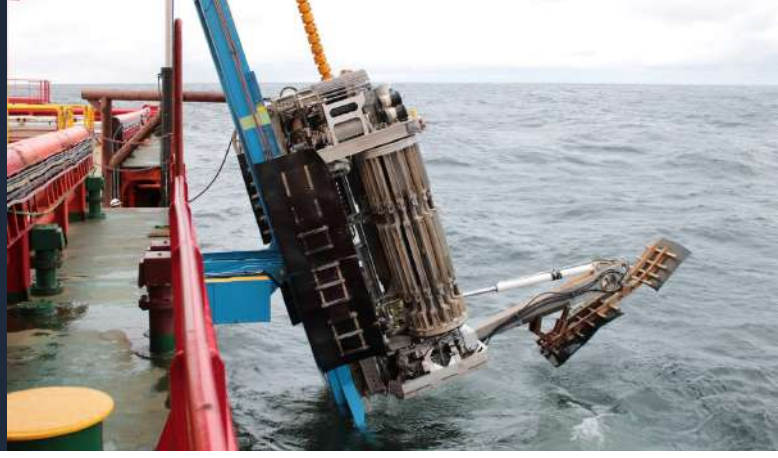
The parties agreed on how to prepare the design documentation defining the vessels for the contracting stage.

During the meeting, a schedule for further proceedings was established. Grupa Przemysłowa Baltic confirmed its ability to build fully equipped service vessels in cooperation with Petrobaltic – Orlen Group.
Source: Baltic Industrial Group

TECHNOLOGY

Benthic completed CPT site investigation for Equinor's Baltyk II and III OWF

28/07/2023



Earlier this year, Benthic, a Geo-services brand in Acteon's Data and Robotics division, completed a site investigation comprising cone penetration tests (CPTs) using its portable remotely operated drill (PROD) that has enabled the design of foundations for about 100 wind turbines and two offshore substations for the Baltyk II and III wind farms offshore Poland in the Baltic Sea. The work for the developments, which are 50–50 joint venture between Norwegian energy company Equinor and Polish power utility company Polenergia, was performed at 16 locations in 40–55 m water depths.

The PROD unit, supported by the survey services of Acteon Geo-services brand UTEC, was deployed from the Ocean Zephyr offshore supply vessel. The geotechnical work began in December 2022 and the three-month project was completed in March 2023. Wind farm construction is expected to start in early 2024, and the first power export is anticipated in 2026.

"We wish to thank Equinor and Polenergia for entrusting us with their Baltyk II and III wind farm development plans," says Jonathan Watt, Benthic Managing Director. "Our PROD unit encountered some of the most challenging soil conditions we have seen to date, including layers of dense sands and medium-dense silty sands, and the project showcased PROD's capability to perform in varying subsurface conditions. A huge congratulations must be extended to all the project participants and stakeholders for a safely executed project and one which supports Poland's energy transition."

Source: Acteon

TECHNOLOGY

PGE Baltica complets its first full year of wind measurements in the Baltica 1 project area

28/07/2023

PGE Baltica announced the completion of the first full year of wind measurements in Baltica 1 project area, and thus successfully completed Phase I of a measurement campaign aimed at capturing the full seasonality in recorded measurement data. As analysts point out, the consistency of the measurements was undisturbed, and the required threshold for data availability was met.

The results of these measurements and, most importantly, accurate wind speed and direction data for a full year will allow a preliminary analysis of the wind resource and productivity of the planned Baltica 1 wind farm. The remaining meteorological and oceanographic data, on the other hand, will be used to continue the work at the stage of detailed design of individual elements of the farm.

At the same time, PGE Baltica said it will continue measurements in the Baltica 1 area for another year. One year's measurements are the minimum necessary, but another year will give an even more complete picture of conditions at sea.

The survey uses a special measuring device operating with floating LiDAR technology located about 85 km offshore. It uses light from a laser beam that reflects off suspended particles in the air and returns to the device. By analyzing the reflected signal, the device estimates the speed of air masses moving over it. The equipment used allows wind surveys to be performed up to about 200 meters above sea level. Additional sensors mounted on the buoy also make it possible to measure the movement of waves and sea currents.

The Baltica 1 project, with a capacity of about 0.9 GW, is scheduled for commissioning after 2030.

Source: PGE Baltica

REGULATORY

Important decision on power grid development for Polish offshore

01/08/2023

An environmental decision has appeared for the 400 kV Choczewo – Żarnowiec line, which was made by the Regional Director of Environmental Protection in Gdańsk. Officials have issued an environmental decision for the construction of the project. The decision was announced on social media by Anna Trzeciakowska, Government Plenipotentiary for Strategic Energy Infrastructure.

Construction of the 400 kV Choczewo Żarnowiec line is expected to begin next year and be completed in 2025. This is one of the most important elements of the development of the transmission system in Poland related to the construction of offshore wind farms.

At the end of last year, Polish power grid operator (PSE) presented a plan for the development of the transmission system until 2032. Offshore wind energy is one of the key areas of system transformation. This is followed by investments in infrastructure to take power out of the Baltic Sea and transmit it to southern Poland.

Development plan for meeting current and future electricity demand for 2023-2032 [„Plan rozwoju w zakresie zaspokojenia obecnego i przyszłego zapotrzebowania na energię elektryczną”] has been agreed with the ERO president. The document indicates that the main investments that PSE is planning are to support, among other things, the government’s plan to build offshore wind farms in the Baltic Sea. – declared by, then president of PSE, Eryk Kłossowski

The total production potential of the various types of RES indicated by PSE implies the possibility of producing more than 100 TWh per year of renewable energy by 2030, which will significantly exceed 50% of Poland’s net electricity demand given current projections and is significantly more than the levels assumed in national strategic documents.

The Polish Power Grid indicates that so far (as of the end of 2021) 8.389 GW of offshore wind farms have been contracted for connection to the transmission grid. And based on the value specified in the offshore wind power support law, 10.9 GW of offshore wind power is expected to be built in the NPS over the next 10 years, with a production potential of 40 TWh.

The following capacities of offshore wind power plants in 2032 were assumed: Krzemienica Station (Słupsk Station area) – 4.422 GW, Choczewo Station – 5.039 GW and Słupsk Station – 1.440 GW.The document included a detailed list of ongoing and planned investments in the expansion and modernization of the transmission network to derive power from offshore wind farms and transmit electricity in the north-south direction.

Source: RDOS & BalticWind.EU

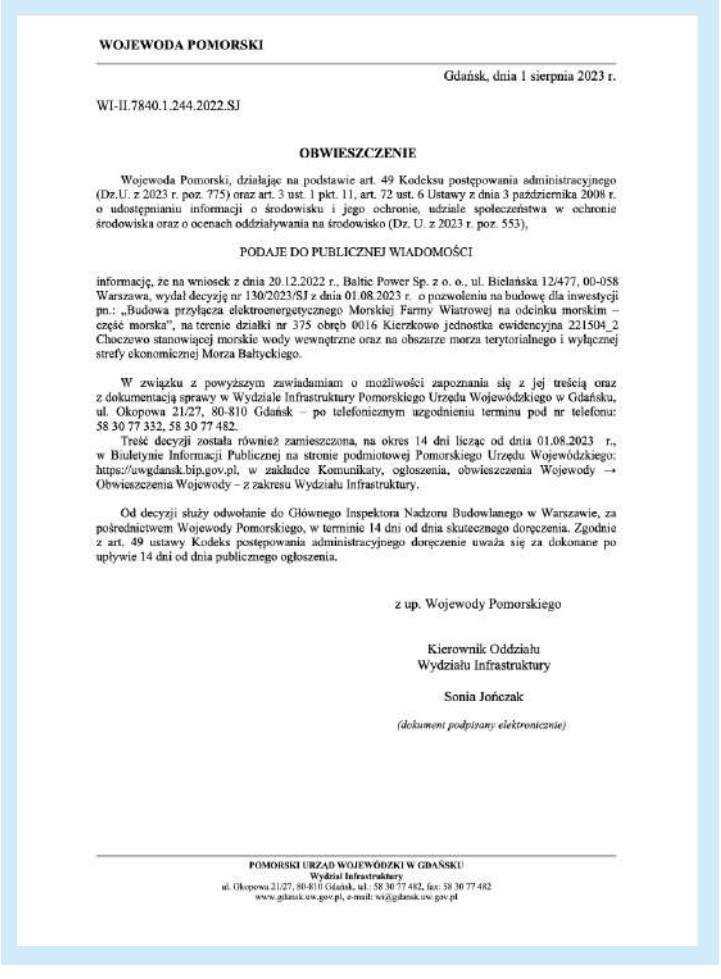
Baltic Power's strategic permit for construction of offshore connection

02/08/2023

Baltic Power has obtained a construction permit for an offshore connection. The decision was announced by the Pomeranian governor. Baltic Power's offshore wind farm will consist of 76 turbines with a unit capacity of 15 MW and height of more than 200 meters operating in an area of approx. 130 km2. The farm will be located about 23 kilometers from the coast, at the height of Choczew and Łeba, where the farm's service port will be built.

According to the governor's notice, the decision was issued on a request dated 20/12/2022 and filed by investor Baltic Power Sp. z o. o. with no objections to the planned investment received during the proceedings.

Baltic Power is currently the most advanced offshore wind farm project in Poland. The company ended 2022 by fully securing contracts for all key components required for the wind farm as part of its planned supply chain. In 2023, with all environmental decisions and construction permits secured, Baltic Power begins its first onshore construction work.



WOJEWODA POMORSKI

Gdańsk, dnia 1 sierpnia 2023 r.

WI-II.7840.1.244.2022.SJ

OBWIESZCZENIE

Wojewoda Pomorski, działając na podstawie art. 49 Kodeksu postępowania administracyjnego (Dz.U. z 2023 r. poz. 775) oraz art. 3 ust. 1 pkt. 11, art. 72 ust. 6 Ustawy z dnia 3 października 2008 r. o udostępnianiu informacji o środowisku i jego ochronie, udziale społeczeństwa w ochronie środowiska oraz o ocenach oddziaływania na środowisko (Dz. U. z 2023 r. poz. 553),

PODAJE DO PUBLICZNEJ WIADOMOŚCI

informację, że na wniosek z dnia 20.12.2022 r., Baltic Power Sp. z o. o., ul. Bielańska 12/477, 00-058 Warszawa, wydał decyzję nr 130/2023/SJ z dnia 01.08.2023 r. o pozwoleniu na budowę dla inwestycji pn.: „Budowa przyłącza elektroenergetycznego Morskiej Farmy Wiatrowej na odcinku morskim – część morska", na terenie działki nr 375 obręb 0016 Kierzkowo jednostka ewidencyjna 221504_2 Choczewo stanowiącej morskie wody wewnętrzne oraz na obszarze morza terytorialnego i wyłącznej strefy ekonomicznej Morza Bałtyckiego.

W związku z powyższym zawiadamiam o możliwości zapoznania się z jej treścią oraz z dokumentacją sprawy w Wydziale Infrastruktury Pomorskiego Urzędu Wojewódzkiego w Gdańsku, ul. Okopowa 21/27, 80-810 Gdańsk – po telefonicznym uzgodnieniu terminu pod nr telefonu: 58 30 77 332, 58 30 77 482.

Treść decyzji została również zamieszczona, na okres 14 dni licząc od dnia 01.08.2023 r., w Biuletynie Informacji Publicznej na stronie podmiotowej Pomorskiego Urzędu Wojewódzkiego: https://uwgdansk.bip.gov.pl, w zakładce Komunikaty, ogłoszenia, obwieszczenia Wojewody → Obwieszczenia Wojewody – z zakresu Wydziału Infrastruktury.

Od decyzji służy odwołanie do Głównego Inspektora Nadzoru Budowlanego w Warszawie, za pośrednictwem Wojewody Pomorskiego, w terminie 14 dni od dnia skutecznego doręczenia. Zgodnie z art. 49 ustawy Kodeks postępowania administracyjnego doręczenie uważa się za dokonane po upływie 14 dni od dnia publicznego ogłoszenia.

z up. Wojewody Pomorskiego

Kierownik Oddziału
Wydziału Infrastruktury

Sonia Jończak

(dokument podpisany elektronicznie)

POMORSKI URZĄD WOJEWÓDZKI W GDAŃSKU
Wydział Infrastruktury
ul. Okopowa 21/27, 80-810 Gdańsk, tel.: 58 30 77 482, fax: 58 30 77 482
www.gdansk.uw.gov.pl, e-mail: wi@gdansk.uw.gov.pl

The entire infrastructure accompanying the Baltic Power farm was designed to minimize the investment's environmental impact. The substation, which is the onshore part of the Baltic Power wind farm, will serve as a hub for cable lines transmitting electricity from offshore substations nearly 30 kilometers away. Almost the entire route of the approx. 7-kilometer land section of the cable will be led underground. This also applies to the beach – thanks to the use of the so-called guided drilling, the power output to land will be routed at a depth of approx. 10 meters underground. This will make it invisible and will not affect the ability to use the beach. The course of the overland cable route was designed so that the investment interferes minimally with the natural environment and bypasses valuable natural areas.

In May of this year, as we reported in BalticWind.EU, ORLEN Group and Northland Power have already begun construction of an onshore substation in the municipality of Choczewo, which will allow Baltic Power to receive energy generated offshore by the wind farm.

According to the schedule, the first offshore installation work will begin in 2024. At the same time, in 2022, ORLEN Group has made a strategic decision to build Poland's first offshore wind farm installation terminal. The investment is being carried out in the port of Świnoujscie and will be one of the most modern terminals in Europe when completed in late 2024/2025. Its wharves and storage yards will allow for the transportation and installation of state-of-the-art wind turbines of 15 MW and above. Once completed, the farm will be able to supply more than 1.5 million households with clean energy.

Source:
Pomeranian Governor & BalticWind.EU

PGE gains approval from the Board of Directors of the European Investment Bank to support financing of Baltica Offshore Wind Farm

08/08/2023

The European Investment Bank (EIB) has issued a preliminary credit decision for the PGE Group's Baltica offshore wind project. The total financing package amounts to €1.4 billion. It is a significant step in securing the optimal financing structure to build PGE's first offshore wind farms in the Baltic Sea.

The project will consist of several phases, with one tranche to be released under the Project Finance formula of 350 million euros for each of the Baltica phases – Baltica 2 and Baltica 3 – as well as one tranche to be released based on guarantees from financial institutions, banks or export credit agencies.

Accelerating the energy transition is a priority, which is why the EIB and the European Commission have set up the RePowerEU initiative to make the European Union independent of Russian energy resources and develop the EU's energy sector toward renewable energy. The Baltica OWF fits perfectly with these goals.

Obtaining a preliminary credit decision from the European Investment Bank is a significant step for financing the construction of the largest offshore farm in the Baltic. The presence of a recognized international bank in the financing of the project is a signal that we are a reliable partner for financial institutions, the projects we conduct meet the highest standards, and the interest of the financial sector in cooperation with PGE in the area of offshore wind energy is really high – said Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna.

EIB Vice President, Prof. Teresa Czerwińska said: "Diversification of energy sources and independence from fossil fuels are key tasks for Poland and for the European Union. The Baltica Offshore Wind Farms are a very important project to achieve these goals. Supporting the energy transition is a priority for the EIB as it accelerates green economic development and creates new jobs."

PGE is constructing the Baltic offshore wind farm together with their Danish partner Ørsted. The project, with a total capacity of approx. 2.5 GW consists of two phases – Baltica 2 with a capacity of approx. 1.5 GW, which is scheduled for delivery in 2027, and Baltica 3 with a capacity of approx. 1 GW, which is scheduled to be operational by the end of this decade.

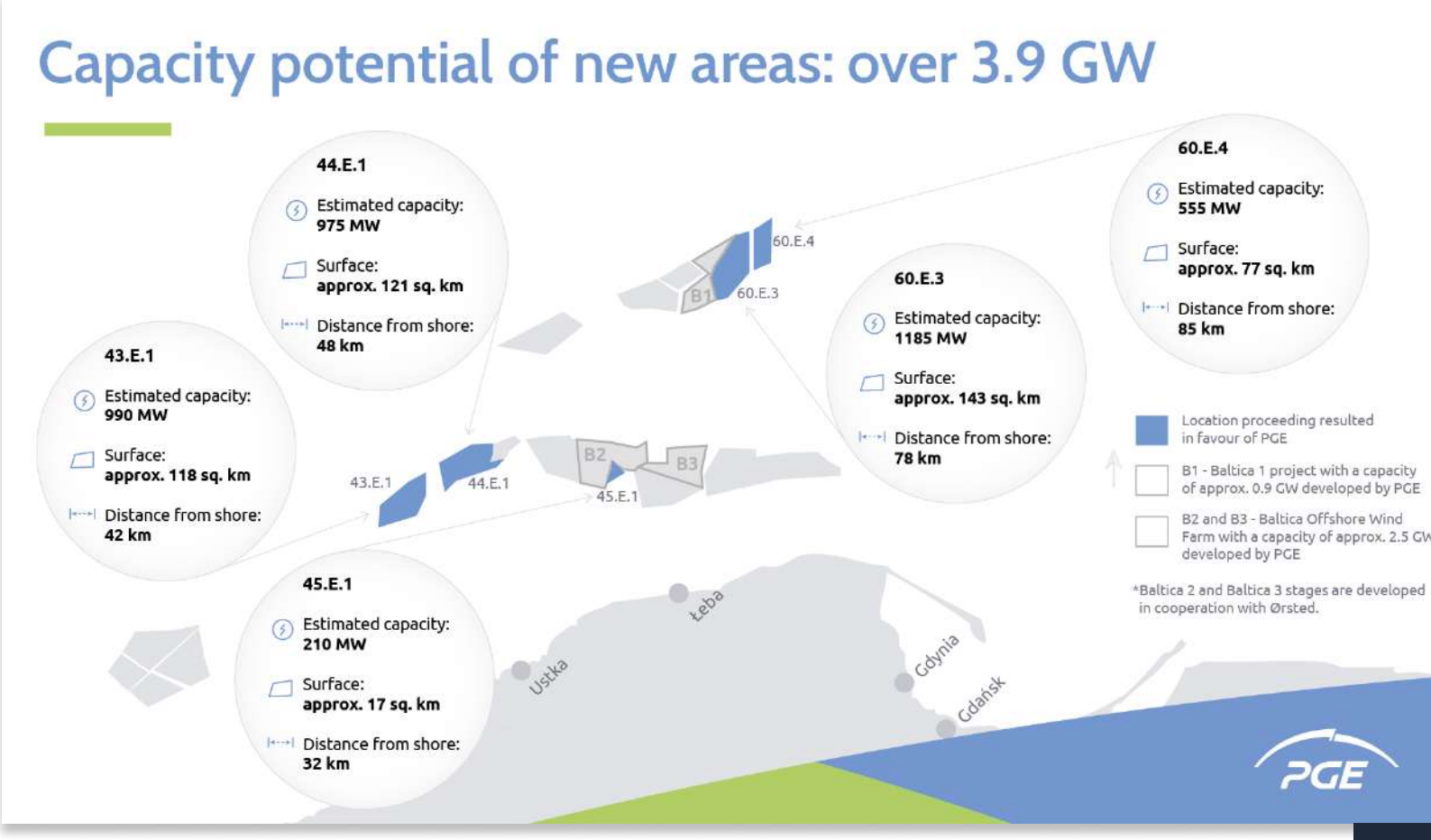
PROJECTS

PGE with Ministry of Infrastructure's decisions on granting permits under Phase II offshore

10/08/2023

Polska Grupa Energetyczna announced that the Ministry of Infrastructure has issued decisions on granting permits for the erection of artificial islands, structures and equipment in Polish maritime areas for projects involving the construction of offshore wind farms. The decision concerns, among other things, areas in the Baltic Sea applied for in adjudication proceedings by the PGE Group.

Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna, commenting on the final decisions of the Ministry of Infrastructure on new PSzW (permit to erect and use artificial islands, structures, and equipment for offshore wind farms), said: The PGE Group is the undisputed leader of offshore wind power in Poland. In terms of generation capacity, we are implementing the largest RES investments in the Baltic. Today, we received final decisions from the Ministry of Infrastructure on five permits that will allow more offshore wind farms to be built in the future. The total potential capacity of wind farms planned for construction in the new areas is approx. 3.9 GW. This is in addition to the capacity of the PGE projects already underway. The implementation of the plans and the development of new areas in the coming years will result in us not only reaching, but even exceeding our strategic target of 6.5 GW of offshore capacity set for 2040.



Details of the new basins awarded to the PGE Group:

Area 43.E.1:

Area 43.E.1 is close to PGE's ongoing offshore wind farm projects and the service port under construction in Ustka.Potential power: 990 MWArea size: approx. 118 sq. km.Distance from the shore: approx. 42 kmApplicant: PGE Baltica 4 sp. z o.o. (in which 55.04% of shares are held by PGE, with the remainder held by Tauron Polska Energia SA)

Area 44.E.1:

Area 44.E.1 is close to PGE's ongoing offshore wind farm projects and the service port under construction in Ustka.Potential power: 975 MWArea size: approx. 121 sq. km.Distance from the shore: approx. 48 kmApplicant: Elektrownia Wiatrowa Baltica 9 sp. z o.o. (in which 100% of the shares are held by PGE)

Area 60.E.3:

The area is directly adjacent to the Baltica 1 project already under development by PGE.Potential power: 1185 MWArea size: approx. 143 sq. km.Distance from the shore: approx. 78 kmApplicant: Elektrownia Wiatrowa Baltica 1 sp. z o.o. (in which 100% of shares are held by PGE)

Area 60.E.4:

Area 60.E.4 is close to the Baltica 1 project.Potential power: 555 MWArea size: approx. 77 sq. km.Distance from the shore: approx. 85 kmApplicant: Elektrownia Wiatrowa Baltica 5 sp. z o.o. (in which 66.19% of shares are held by PGE, with the remainder held by Enea SA)

Area 45.E.1:

Area 45.E.1 is located in the vicinity of the ongoing Baltica 2 and Baltica 3 projects, directly adjacent to the area where the Baltica 2 project is being implemented.Potential power: 210 MWArea size: approx. 17 sq. km.Distance from the shore: approx. 32 kmApplicant: Elektrownia Wiatrowa Baltica 2 sp. z o.o. (in which PGE owns 50% of the shares and Ørsted owns the remainder).

The total potential of offshore wind farms that can be built in all these areas exceeds 3.9 GW. PGE Group is currently preparing to build offshore wind farms in the Baltic Sea with a total capacity of 3.4 GW. Baltica 2 with a capacity of approx. 1.5 GW and Baltica 3 with a capacity of approx. 1 GW make up the Baltica Offshore Wind Farm, which is expected to start producing electricity later this decade. PGE is implementing this project in cooperation with Ørsted. Independent of the Baltica offshore wind farm, the PGE Group is preparing to build the Baltica 1 project with a capacity of approx. 0.9 GW. This wind farm is scheduled for commissioning after 2030.

Source: PGE

PROJECTS

Baltic Power offshore wind farm with conditional investment decision

11/08/2023

ORLEN's Supervisory Board has made a conditional investment decision for the Baltic Power offshore wind farm, enabling the finalization of the design phase. The construction phase is scheduled to begin later this year, once the process of raising financing and completing building permits has been completed. At this stage, the joint investment by ORLEN and Northland Power is the most advanced offshore wind project in Poland.

– The results of the energy transition are clean, widely available energy, as well as a competitive and modern economy. By 2030, the ORLEN Group will make a leap in the development of renewable energy sources, reaching 9 GW of installed capacity. Offshore wind energy will be a key component of this change. As regional pioneers in this area, we have had to do a tremendous amount of preparatory and administrative work and build new competencies that we will be able to use on future projects. Today's decision is a milestone that brings us significantly closer to achieving the group's strategic goals – underlines Daniel Obajtek, President of the ORLEN Management Board.

The Baltic Power project, in which ORLEN holds more than 51% of shares, is the most advanced offshore wind farm project under construction in Poland. Its total budget is estimated at around €4.73 billion, and includes capital expenditures with insurance (at around €4.05 billion), as well as financing costs and a supplementary reserve.

The investment's shareholders assume that its financing will be carried out under the Project Finance formula, a model in which repayment of liabilities will be based on future financial surpluses generated by the project. The Project Finance formula is particularly favorable for investments that require significant investment and time to reach full capacity, such as the construction and operation of offshore wind farms. At the same time, it fits into the financial assumptions of the updated ORLEN2030 strategy.

The Baltic Power project has all the construction permits for the onshore part of the project, as well as a permit for the construction of an offshore power connection to bring power from the farm to land. It also has secured contracts for all key components of the farm – including turbines, offshore and onshore substations, cables and foundations – along with their manufacture, transportation and installation. One of the conditions for reaching a final investment decision remains obtaining construction permits for the offshore portion of the project.

The construction of the Baltic Power offshore wind farm is one of the ORLEN Group's key projects for achieving its strategic goal of 9 GW of installed renewable energy capacity by 2030. The farm will be built around 23 km from the shore, at the level of Łeba and Choczew, and will consist of 76 state-of-the-art wind turbines with a unit capacity of 15 MW. With the completion of construction in 2026, the Baltic Power farm will begin producing energy to power more than 1.5 million households.

Source: ORLEN

PROJECTS

NKT awarded the contract for export power cables for the Baltic Power

16/08/2023

NKT has signed the order for the power cable system for the Polish offshore wind project Baltic Power. The project is important for the transition to renewable energy in Poland and the national ambitions of up to 11 GW offshore wind installed by 2040.

Now, NKT has signed the order for offshore export power cables for the Baltic Power Offshore Wind Park which will be the first offshore wind farm in Poland located 23 km off the coast. With 76 wind turbines, it provides a capacity of up to 1.2 GW and will thereby be an important contributor to the Polish ambitions to install up to 11 GW of offshore wind in the Baltic Sea by 2040.

– We are proud to support the development of offshore wind in the Baltic Sea with the order for Baltic Power. The project is an important step in the Polish transition to renewable energy, and we are pleased to leverage our experience to support the development of the offshore wind sector in Poland, says Lukas Sidler, Executive Vice President and Head of HV Solutions in Cologne, where NKT will manufacture the offshore power cables.

NKT will execute the power cable project for Baltic Power in a consortium with two partners.

The order award does not change the 2023 financial outlook for NKT.

Source: NKT

PROJECTS

Vestas signs a conditional agreement for an up to 1.2 GW offshore project in Poland

17/08/2023

On 10th of August, Vestas informed that it has entered into a conditional agreement to deliver wind turbines for the offshore wind power project Baltic Power in Poland with a capacity of up to 1.2 GW.

If and when the agreement translates into a firm and unconditional order, Vestas will disclose this in a company announcement in accordance with the company's disclosure policy.

Last year, Baltic Power announced that it will require 76 state-of-the-art 15 MW turbines from Vestas, whose components will be manufactured at the supplier's new assembly factory in Szczecin. The turbine factory, to be manned by a staff of up to 700, is scheduled for completion in 2024, while the ORLEN Group's installation terminal at the Port of Świnoujście will commence operations in 2025. Read more here

The Baltic Power farm, with a capacity of up to 1.2 GW, will be located about 23 kilometres off the coastline, near Choczewo and Łeba. When completed in 2026, it will be able to generate clean energy for more than 1.5 million households.

Source: Vestas

PROJECTS

Pomeranian Governor has issued the first three construction permits for Baltic Power

17/08/2023

Construction of wind farms in the Baltic is about to begin. Pomeranian Governor Dariusz Drelich today issued the first three construction permit decisions for Baltic Power.

The permits are for three tasks related to the construction of offshore wind farms with a total capacity of 1,200 MW and the infrastructure associated with these farms. Tasks include:

– Construction of two substations in the Baltic Sea

– Construction of an electricity and telecommunications network connecting offshore wind turbines and transformer substations of transformer stations

– Construction of 76 offshore wind turbines in the Baltic Sea.

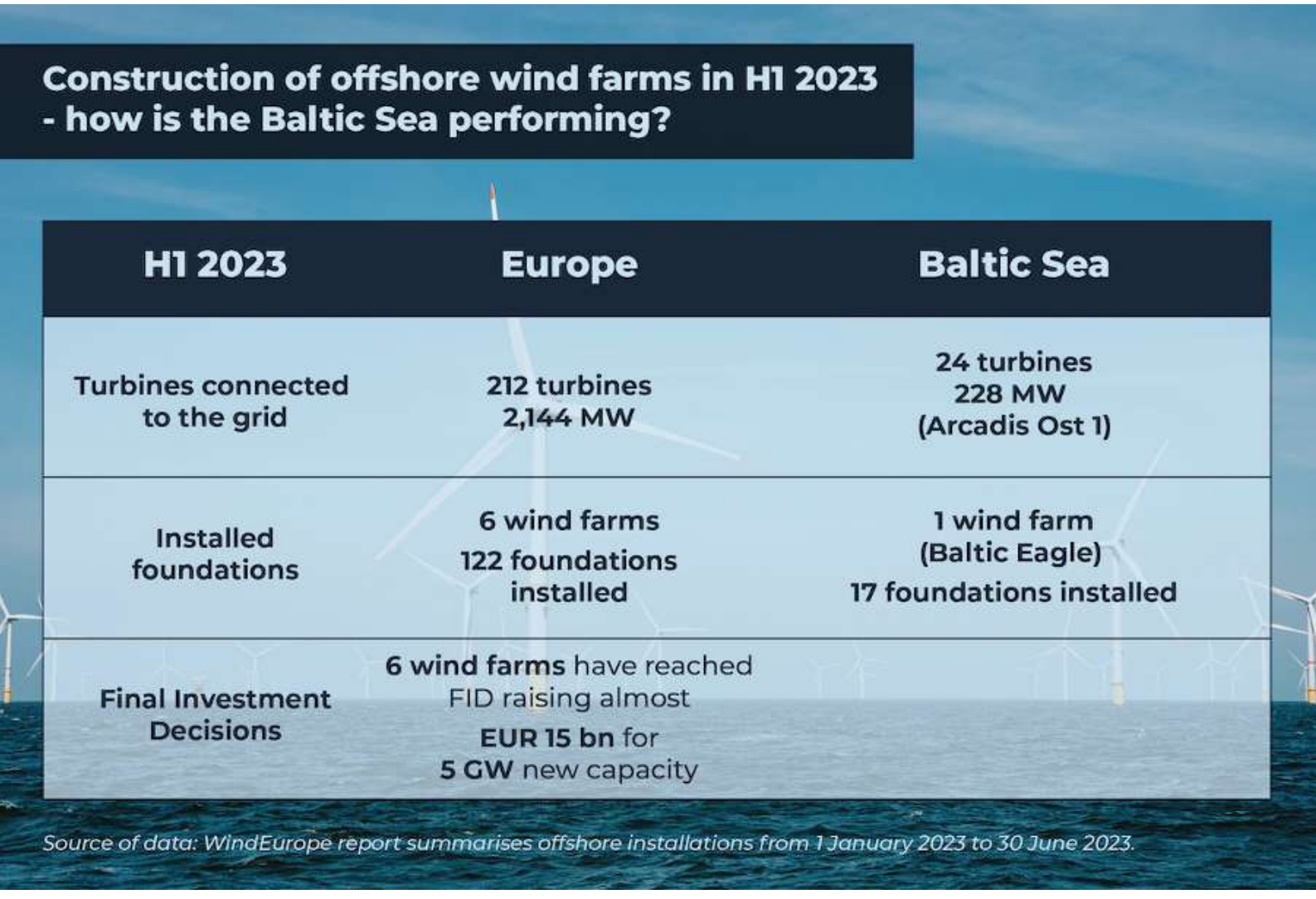
All these investments are part of the project Offshore Wind Farm Complex with a maximum total capacity of 1200 MW and technical, measurement, research and service infrastructure related to the preparation, execution and operation stages (“Baltic Power OWF”).

Source: Pomeranian Voivodship Office in Gdansk

Construction of offshore wind farms in H1 2023 – how is the Baltic Sea performing?

WindEurope has summarised the development of offshore wind energy in Europe in the first half of 2023. How does the Baltic Sea look in comparison to Europe? Below we present details of the projects under construction during this period.

Europe built 2.1 GW of new offshore wind in the first half of 2023, bringing its total offshore wind capacity to 32.4 GW. 13 wind farms were under construction in Europe, for the installation of foundations and turbines – representing a total 7.2 GW of new capacity. Final investment decisions were taken for a further 5 GW after delays last year. But this is still whims what the EU wants. This is below the level needed to reach Europe's energy and climate targets. The EU should be building on average 11 GW a year of offshore between now and 2030.



Connected turbines

2,144 MW (212 turbines) – including 228 MW (24 turbines) of Arcadis Ost 1 wind farm on German part of Baltic Sea – were connected to the grid in Europe in the first half of 2023.Arcadis Ost 1 with total capacity of 257 MW is the first wind farm using a floating installation method for turbines.

Installed foundations

In Europe 6 wind farms already installed foundations, they will progress turbine installation in the second half of 2023. One of theme is Baltic Eagle offshore wind farm on German waters where 17 foundations have been installed. This 476 MW wind farm where in total 50 turbines will be operating will be commissioned in 2024.

Final Investment Decisions obtained

Investments in new wind farms is recovering after no large-scale projects reached Final Investment Decision (FID) in 2022. In Europe 6 wind farms have reached FID in first half of 2023 raising almost EUR 15 bn for 5 GW new capacity. There were no Baltic Sea wind farms among them.

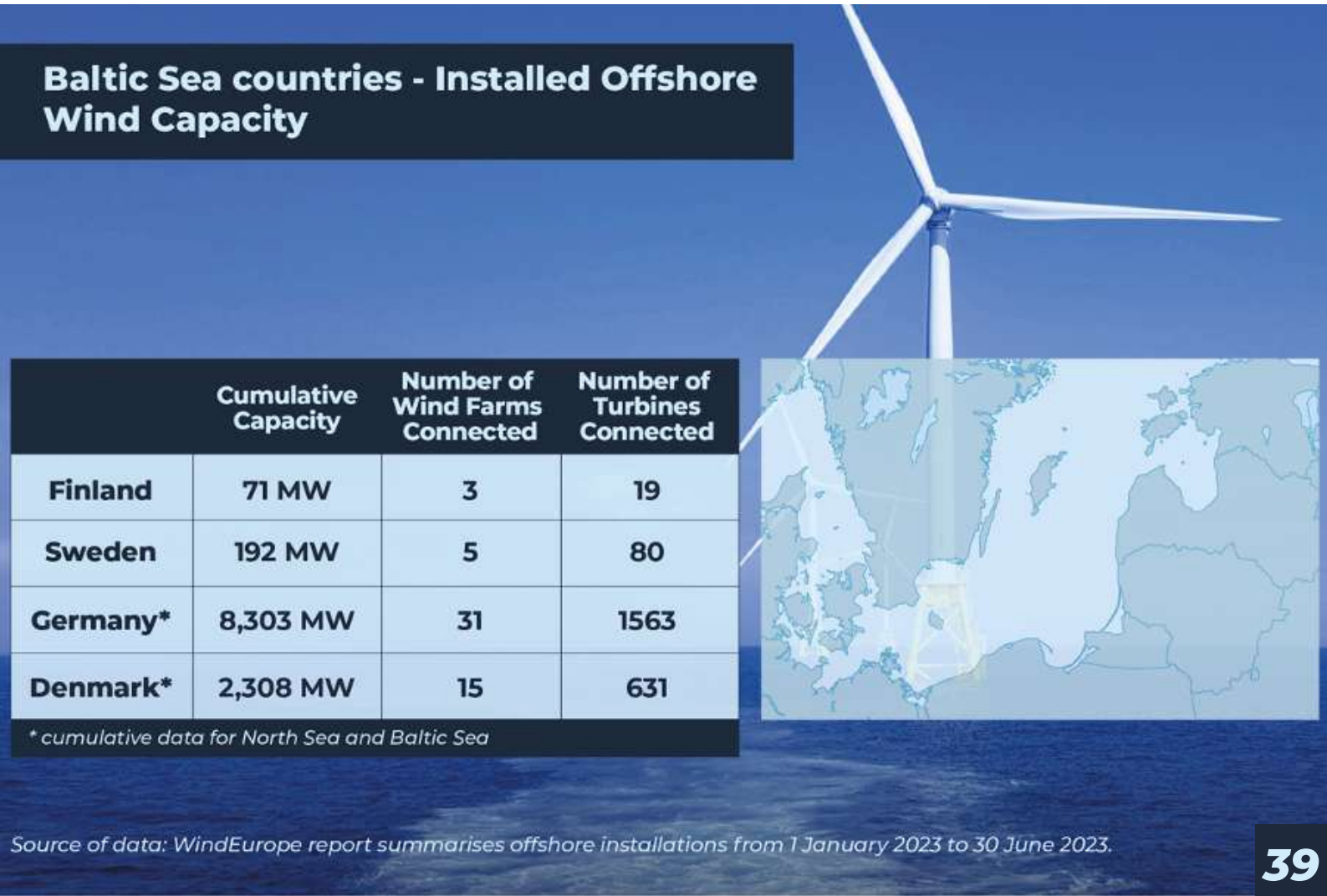
Installed offshore capacity

Europe's installed offshore capacity now stands at 32 430 MW. On the Baltic Sea there are:

- Finland 71 MW (3 wind farms, 19 turbines connected)
- Sweden 192 MW (5 wind farms, 80 turbines connected)
- Germany* 8.303 MW (31wind farms, 1563 turbines connected)
- Denmark* 2.308 MW (15 wind farms, 631 turbines connected)* cumulative data for North and Baltic Seas

Source of data: WindEurope report summarises offshore installations from 1 January 2023 to 30 June 2023.

Author: Pawel Wrobel



COOPERATION

New deal will foster Norway-Poland collaboration on offshore wind

31/08/2023

Norwegian Offshore Wind has on behalf of 380 members just signed a MOU with The Polish Investment and Trade Agency, aiming to boost offshore wind collaboration between the two countries.

The Memorandum of Understanding was signed in Warsaw this week.

-These two markets have different strengths within offshore wind, and we therefore have a lot to gain on establishing strong connections between both supply chain companies and developers, says manager of Norwegian Offshore Wind, Arvid Nesse.

He points out that Poland has experience within construction, and the potential for establishing sites that can deliver to projects around the North Sea and the Baltic Sea is large.

-At the same time, Norway has an offshore expertise that will be vital when the Polish are moving forward with their projects, says Nesse.

The Polish government has set an overall target of establishing 18 GW of offshore wind before 2040. They have a clear timeline of the auctions that will take place and the volume per tender.

-The offshore wind development is a hot topic in Poland. We see a huge interest from manufactures and supply chain companies. With the signing of the MOU with Norwegian Offshore Wind, we are on a good path to reach our goals, says Lukasz Grabowski, Director of Export in Polish Investment and Trade Agency

The MOU will enable networking, knowledge sharing and targeted measures towards specific projects in the two countries. During their visit to Warsaw, Norwegian Offshore Wind management also met with the Ministry of Climate and Environment, The Ministry of Foreign Affairs and Polish Agency of Enterprise Development.

Source: Norwegian Offshore Wind

PROJECTS

Industrial Development Agency JSC begins construction of wind tower factory in Gdansk

01/09/2023

The Industrial Development Agency JSC (ARP S.A.), together with strategic partners GRI Renewable Industries, S.L. and Baltic Towers Sp. z o.o., is launching a new investment to support the development of Offshore Wind Energy (OWE). This is a landmark event for the Polish renewable energy sector.

On August 31, 2023, construction of an offshore tower factory was inaugurated in Gdansk. This is an investment that is expected to be a significant step towards strengthening Poland's position in the field of renewable energy. The inauguration ceremony brought together many guests from the wind energy sector and representatives of local and national authorities.

The construction of a new offshore tower factory in Gdansk, which is a joint venture between ARP S.A., Spanish company GRI Renewable Industries, S.L. and Baltic Towers sp. z o.o., which was established to carry out the investment, is expected to contribute to significant progress in the development of the wind energy sector in Poland. The new investment, located in Gdansk with access to the waterfront, will include the construction of an offshore tower manufacturing facility for the largest planned wind turbines of more than 15 MW. The state-of-the-art production facility, designed and built in accordance with Industry 4.0 standards, will have a production capacity capable of manufacturing more than 150 towers per year. The new plant will meet the highest technical, quality and environmental standards set by key customers in the OWE market.

Thanks to the use of innovative solutions, already at the design stage, the newly built plant will be friendly to both employees and the environment. More than 500 highly specialized jobs will be created, in the modern and promising offshore wind energy industry.

Offshore wind energy is currently one of the fastest growing energy sectors. Both the dynamic boom driven by the European energy policy, the implemented energy transition processes in Poland and the adopted law on promoting electricity generation in offshore wind farms are aimed at significantly increasing the share of renewable energy in energy generation. Such conditions justify the investment decisions that are being made, which not only meet market demand, but also contribute to increasing energy security in Poland and Europe.

The new investment is also perfectly in line with the concept of "local content", which is an important element in the transformation and acceleration of the Polish economy – modernizing it and developing it in terms of Polish economic interest and involvement in the development of the local community.
The effects of this investment will be seen and felt locally, supporting the development of local resources and contributing to the creation of a lasting legacy for the Gdansk community and beyond. The new investment will undeniably bring a positive change to the existing landscape of Gdansk, especially in the areas of the Gdansk Shipyard.
It is an investment that will become part of the economic landscape of the Tri-City for years to come, restoring industrial functions in the area of the southern end of Ostrów Island.

Guests at the ceremony included **Jon Riberas – Chairman of GRI Renewable Industries and Ramiro Fernández Bachiller – Spanish Ambassador to Poland.**

– We are proud to participate in this key project for wind energy in Poland. It aims to achieve sustainability and carbon neutrality. This joint venture creates a global leader in the offshore market that will contribute to the ambitious goals for installing renewable energy sources in the next decade – stresses Jon Riberas.

– The Industrial Development Agency has been committed to rebuilding the industrial potential of the Polish economy for years. In turn, the ARP's new strategy is to invest more in the energy transition. I am convinced that the construction of a tower factory for offshore wind energy in Gdansk is a wind in the sails for the entire Polish economy. It is a project that combines economic interests, and those of strategic energy security, of Poland and Europe – added Cezariusz Lesisz, President of the Management Board of the Industrial Development Agency JSC.

The shovel-driving ceremony was a symbolic event, marking the beginning of the construction of the plant, which is expected to become an important element in the renewable energy landscape in Poland and Europe as early as in the second quarter of 2025.

EDUCATION

Nearly 17,000 people took part in the third edition of the “PGE Beach – Know the Power of the Baltic Wind” project

01/09/2023

Nearly 17,000 residents and tourists vacationing at the Polish seaside visited PGE educational zones in Ustka, Łeba and Sasin. For 36 days, as part of the project “PGE BEACH – KNOW THE POWER OF THE BALTIC WIND”, thanks to dedicated attractions, you could learn interesting facts about offshore wind farms and renewable energy sources.

Offshore wind farms are a strategic economic project that will change the face of the Polish energy industry in just a few years. As a leader in the offshore industry, we are conducting advanced work on launching the first Baltica Wind Farm in Poland, through which we will provide clean energy to 4 million households by 2030. Its importance to the Polish economy is once again evidenced by the number of people who took advantage of PGE’s educational zones in Ustka, Łeba and Sasin. Despite difficult weather conditions, this year’s third edition of the “PGE Beach – Know the Power of the Baltic Wind” project was visited by nearly 17,000 people, said Wojciech Dąbrowski, President of the Board of PGE Polska Grupa Energetyczna.

As part of the “PGE Beach – Know the Power of the Baltic Wind” project, from July 7 to August 15, several thematic zones awaited visitors to the PGE Beaches in Ustka, Łeba and Sasin, including an interactive education zone, knowledge zone, educational and workshop zone or sports zone, where both residents and tourists of all ages could expand their knowledge of renewable energy sources and offshore wind farms.

On weekends, additional attractions awaited visitors, such as quizzes and nature workshops. A quiz on nature and animal protection and a workshop on recognizing animal tracks, with the Choczewo forestry division, was attended by about 150 people. Meanwhile, more than 190 participants enjoyed a wood-burning workshop with representatives of the Lębork forestry commission. During four WOPR water rescue demonstrations and one demonstration by the Choczewo TSO, one could gain knowledge about first aid. On the other hand, at two meetings in Łeba and Sasin, with a representative of the Maritime Office in Gdynia, one could listen to a lecture “The Beachgoer’s Code”, which concerned the protection of dunes and the coast.

The weekends also provided a powerhouse of sports activities. The multipurpose field allowed for beach volleyball, soccer and tug-of-war. In addition, meetings were held with PGE-supported athletes, including representatives of the National Team in windsurfing Michal Polak and Radoslaw Furmanski, Izabela Satrjan a National Team competitor in kite surfing, and Zofia Korsak and Oliwia Laskowska of PGE Sailing Team Poland in the 470 class.

The "rowing machine" sports equipment available at the PGE Beach mobilized 16,850 participants in an effort that resulted in a total of 1,296 kilometers being "swum", which is more than 50 times the distance to the nearest PGE wind turbine, which will be built in the Baltic Sea and will be 25 kilometers from the shore. Visitors to the PGE zone could also send seaside postcards. A total of 1,000 people sent traditional greeting postcards from the three locations.

The "PGE Beach – Know the Power of the Baltic Wind" project was organized for the third time by the PGE Foundation as part of educational activities related to the PGE Group's Offshore program in the Baltic Sea.

The PGE Group is Poland's largest power company and a leader in the production of electricity from renewable energy sources in Poland. PGE is pursuing the largest domestic program to build offshore wind farms in the Baltic Sea. As part of the Offshore program, PGE currently has investments in the Baltic Sea with a total capacity of approx. 3.4 GW: Baltica 2 and Baltica 3 with a total capacity of approx. 2.5 GW and Baltica 1 with a total capacity of approx. 0.9 GW. PGE's first electricity from the Baltic Sea will flow in 2027. PGE Group's strategic goal in the area of offshore energy is to build at least 6.5 GW of capacity by 2040. This will allow the country to meet the energy needs of 10 million households.

In addition, the Ministry of Infrastructure has granted PGE final decisions on five permits that will allow it to build more offshore wind power plants in the future. The total potential capacity of wind farms planned for construction in the new areas is approx. 3.9 GW.

You can find more information at:
https://plazagkpge.pl/

YouTube video:
https://youtu.be/2XcGgNVv11s

OPINION

Budzyński, PTMEW: there is tremendous mobilisation of the supply chain, but we notice a huge imbalance of demand and supply

05/09/2023

Podpis: Jakub Budzynski, Vice President of PTMEW

On 20-21 September, the 12th edition of the international conference 'Offshore Wind – Logistics & Supplies' organised by the Polish Offshore Wind Energy Society (PTMEW) took place in Gdynia. BalticWind.EU was a media patron of the event. Before the conference, we spoke to Jakub Budzynski, Vice President of PTMEW, about where the industry is today, what is most influencing the market, and what participants can expect at this year's conference.

Paweł Wróbel, BalticWind.EU: How do you assess the current situation in the offshore wind market? What are the most important factors shaping the market?

Jakub Budzyński:
Deputy CEO, PTMEW: Globally, we are undoubtedly experiencing an unprecedented boom in the sector. On an ongoing basis, we are observing the process of entry into the offshore wind industry of giant oil companies, more investment funds and the steady growth of the investment portfolios of the market leaders we have known for a long time.

On the supply chain side, we are also seeing tremendous mobilization. It is taking place with varying intensity in different countries and regions of the world. These differences are undoubtedly influenced by factors such as the scale and development potential of individual markets, the previous experience and resources of local suppliers in the field of broad production for the offshore and marine sectors, as well as the environment in the form of favorable or less favorable regulations, multiple support instruments, financial concessions and preference schemes, etc.

The megatrend related to the pursuit of so-called net-zero carbon power generation, needed no longer only to power electricity systems, the dynamic development of power to x technology, the reduction in the level of use of fossil fuels and, finally, the proven high efficiency of offshore wind installations – are the four factors I would describe as mainly determining the strong growth trend in offshore wind markets. Additionally, in our region, the need to diversify energy sources related to the uncertain geopolitical situation due to the war behind our eastern border is not without influence on the development of the RES market.

There are growing doubts whether "bidding" by EU countries for higher and higher offshore wind targets is a good way to accelerate project development – is this the right approach? What actions should accompany them to build the sector's capacity and supply chain in a sustainable way that is resilient to economic fluctuations?

Indeed, we are facing a very heated economic climate practically in the global offshore wind market. Raising capital for so-called "green" or "blue" investments is now becoming relatively easy, and moreover, developing such projects benefits the market and image position of investors and developers. Observing this situation from the side of the supply chain, we notice a huge imbalance between demand and supply of services and products, now even in favor of the projects currently entering the implementation phase, and yet this factor will be one of the mainly decisive ones for the possibility of implementing ambitious investment strategies. Thus, we are faced with the alternative of launching massive investments to develop local supply chains in each area, or reducing strategic targets for offshore wind power to avoid the worst, i.e., abruptly halting or even deleting advanced projects.

The second eventuality seems unlikely today, so there's only one way out – increasing the availability of investment capital for production companies in the sector, a good offer of contract guarantees and insurance, and, as if as a result of the implementation of the previous two, engaging new suppliers in the value chain while raising generation capacity.

A separate issue is the development of transmission networks and transmission infrastructure in general, going even beyond the sphere of the electric power industry. Inextricably linked to this challenge in the case of renewable sources is also the parallel development of the storage potential of generated energy and the above-mentioned development of alternative fuel generation technologies. Only the guarantee of receipt of generated energy is able to ensure a healthy market balance and a stable prospect for the development of the sector in general, so another clue is the development of grid infrastructure and progress in the production and consumption of e-fuels.

Zooming in on the main topics of the upcoming annual PTMEW conference – can you indicate where you see the greatest potential for activities that will allow projects to be implemented in the Baltic Sea?

As every year, the program of our conference 'Offshore Wind – Logistics & Supplies' will be filled with content related to the latest technological developments in the field of offshore wind turbines, power derivation, support structures, shipbuilding in the area of specialized units to support the process of construction and operation of offshore wind farms. We will also discuss innovations in logistics and technical design.

If I were to introduce a gradation of the aforementioned issues in terms of their importance for the development of the local supply chain, I can point to the following:

- *power derivation – in this area we will talk about the status of progress on the conventionally called "fully equipped, Polish offshore trafostation" project. We are glad, as PTMEW, that we will not be discussing this topic at a future, unspecified time. The same comment could apply, for example, to subsea export cables from a Polish manufacturer,*
- *service and operation of offshore wind farms – during this session, panelists will talk about the latest trends in this field, but the theme of the great potential of local companies will also be highly emphasized. It seems that it is O&M in the first phase of development of the Polish market that will allow to generate the largest share of the domestic supply chain,*
- *offshore wind turbine – representatives of Vestas will present very extensive material, presenting the latest results of testing the operating parameters of the 15 MW turbine model, purchased by Baltic Power for the farm of the same name, but above all, the theme that will be covered in depth is contracting local supplies, with a goal in mind of locating production facilities precisely in our country, which is already an officially announced fact,*
- *legal issues related to the contracting process in the offshore wind sector will be a very interesting topic, which has not been discussed at our conferences so far. Experienced lawyers from Poland and Denmark will present the not easy specifics of contracts in the offshore sector, while panelists, who will represent both the demand and supply side, will discuss their point of view on the security of contracting and how to look for a compromise in the area of guarantees and contractual requirements in order to create room in the supply chain also for new entrants*

PROJECTS

PGE and Ørsted contract vessels to install cables for Baltica Offshore Wind Farm

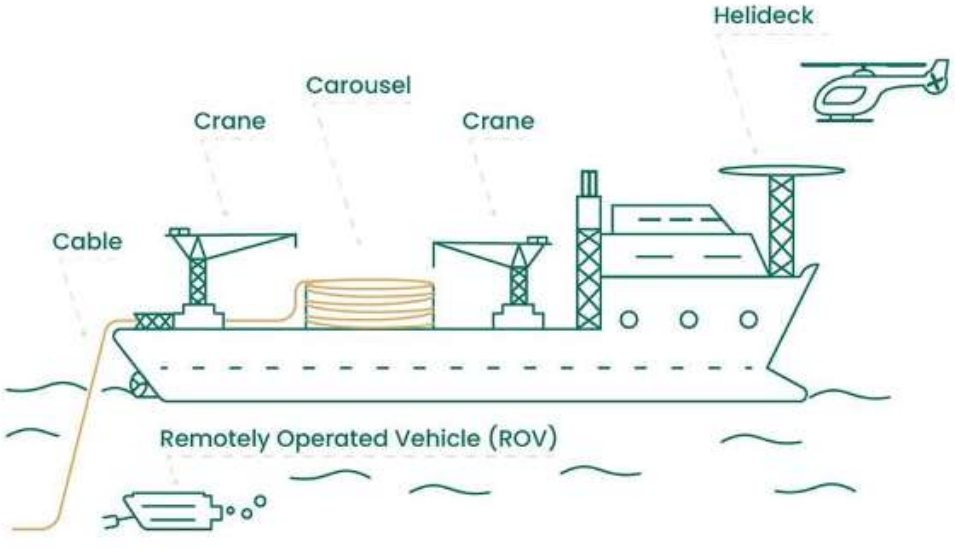
06/09/2023

Photo: Boskalis

PGE Group and Ørsted have signed contracts to lay and connect internal cables and export cables for Baltica 2, one of two phases of the Baltica Offshore Wind Farm. Earlier, they awarded tenders for the supply of offshore export cables that will be used to bring power from offshore wind farms to land.

– We are consistently implementing the next stages of the largest RES project in Poland's history. We have contracted the most important components for the Baltica 2 stage, including the delivery of 107 turbines, as well as foundations and marine transformer stations. We have now moved on to the next phase related to contracting the installation services of the various components. The first result is the signing of a contract to install cables for the 1.5 GW Baltica 2 project – said Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna. – Already in 2027, this investment will ensure a secure supply of green energy for 2.4 million households, while reducing CO2 emissions by nearly 5 million tons per year, adds Wojciech Dąbrowski.

Cable installation vessel for offshore wind farms



Cable Laying Vessel (CLV) can simultaneously lay cables and bury them in the seabed

Sample equipment:

- A special **carousel** used to gradually unroll the cable laid on the bottom. It can hold several thousand tons of cable up to 30 cm in diameter.
- **Remotely Operated Vehicle (ROV)** to monitor the route of the laid cable.
- Heavy-duty **cranes**
- **Helideck** enabling the exchange of the crew without the need for the ship to call at a port and interrupt cable laying.
- 70-120 people can be on board at the same time.

baltica2+3 | by PGE & Ørsted

The company Boskalis, which was awarded the contract to lay and connect the cables, is a world leader in the performing of hydrotechnical and dredging work. Most of their offshore wind projects to date was carried out in the North Sea, but their vessels have also participated in the construction of the Swinoujscie LNG terminal. It will assign several vessels from its fleet to the task of laying cables for Baltica 2 – including a cable laying vessel CLV and a construction support vessel CSV. The contractor will not only be tasked with laying and burying approx. 300 km of export cables and approx. 170 km of internal cables, but also the early removal of boulders to prepare the seabed for the installation of cable lines.

Earlier, PGE and Ørsted signed contracts for the supply of marine export cables, which will be provided by ZTT Submarine Cable & System and Hellenic Cables. Offshore export cables are used to bring power from offshore wind farms to land. The contracts cover a total of approx. 300 km of 275 kV cables. In existence since 1999, ZTT is a leader in the design and manufacture of custom marine equipment. In terms of cable supply, the company has participated in the construction of more than 20 offshore wind farm projects around the world. Hellenic Cables, on the other hand, manufactures cables, wires, as well as plastic and rubber compounds. Over the past decade, the company has become the largest cable manufacturer in Southeast Europe, exporting to more than 50 countries.

– Poland's offshore wind development plan assumes that offshore wind farms built in the Polish economic zone in the Baltic Sea will be able to supply 18 GW of power to the national electricity system by 2040. This energy must be brought safely and reliably to land through cables. By signing more important contracts, with experienced market players, we are consistently moving forward with the Baltica Offshore Wind Farm project as planned, and thus improving Poland's energy security – says Agata Staniewska, Managing Director of Ørsted Offshore Poland.

Source: PGE

EDUCATION

Free Wind Energy Training Initiative Launched in Poland

11/11/2023

In a significant move for the European energy sector, Vulcan Training & Consultancy has partnered with the Polish Wind Energy Association (PSEW) to introduce a pioneering training initiative in Poland. Titled "Get into the wind turbines and work at the highest level!" this program is the first of its kind in the country.

With an investment exceeding 1 million PLN, the project aims to address the growing demand for specialized workers in the wind energy sector, including technicians and wind turbine installers. This initiative underscores the increasing importance of reskilling and HR development in the European energy landscape.

Students from the Maritime School Complex in Darłowo will be the primary beneficiaries of this program. They will have the opportunity to earn professional certificates that hold significant market value, estimated at nearly 20,000 złoty per individual. Notably, the program is entirely free for participants, emphasizing its commitment to fostering talent without financial barriers.

The training sessions are set to commence in October 2023. Meanwhile, the official inauguration of the project is scheduled for the upcoming Wednesday, 13th September, at 11:00 AM at the Maritime School Complex in Darłowo.

This initiative not only highlights the growing emphasis on wind energy in Europe but also the crucial role of training and development in ensuring a skilled workforce for the future of the energy sector.

According to recent data, the offshore wind sector in Europe currently employs over 400,000 individuals. As the continent accelerates its transition to renewable energy, experts estimate that there will be a need to create an additional 200,000 jobs in the sector by 2030.

This underscores the importance of initiatives like the one launched by Vulcan Training & Consultancy and PSEW, which play a pivotal role in equipping the workforce with the necessary skills to meet the growing demands of the industry.

The renewable energy sector in the EU boasted an impressive employment of approximately 1.3 million individuals in 2020. With the accelerated adoption of clean energy solutions, this figure is poised to soar. To put things into perspective, our REPowerEU targets project the creation of a staggering 3.5 million jobs by 2030.

Source: Skills4Energy.eu

PROJECTS

DNV wins contract to certify new Polish offshore wind farms

12/09/2023

Independent energy expert and assurance provider DNV has been awarded a contract by the Equinor and Polenergia S.A. owned joint ventures, MFW Bałtyk II sp. z o.o. and MFW Bałtyk III sp. z o.o for the certification of the Baltyk II and Baltyk III offshore wind farms. The projects, located in the Polish exclusive economic zone of the Baltic Sea, are set to contribute significantly to Poland's renewable energy goals.

With a planned installed capacity of 720 MW each, Baltyk II and Baltyk III will collectively generate 1440 MW of clean energy, enough to power more than 2 million Polish households. The electricity produced will be exported to the Polish transmission grid, operated by the Polish TSO Polskie Sieci Elektroenergetyczne S.A. To ensure efficient operations, each wind farm will have its own offshore substation.
DNV's scope of work includes the delivery of certificates for the windfarms related to design, fabrication / installation / commissioning and operation in accordance with relevant laws, regulations and codes. The following assets are defined as relevant for certification: wind turbine generators (WTG), offshore substation platform, inter-array cables and offshore export cables.

Kim Sandgaard-Mørk, Executive Vice President for Renewables Certification at DNV said: "DNV is extremely pleased to be awarded this contract and contribute to the drive to increase renewable energy in the country. This move by Poland, to expand its offshore wind capacity, is supported by DNV's 2022 Energy Transition Outlook Report which states that the share of offshore wind in total wind electricity generation will increase steadily, rising globally from 8% in 2020 to 34% in 2050. "Throughout the forecast period, Europe will maintain its leading position in terms of the portion of electricity demand met through offshore wind sources — both bottom-fixed and floating".

The development of offshore wind farms in the Baltic Sea is a crucial step towards Poland's transition to a greener and more sustainable energy future. These projects will not only contribute to reducing carbon emissions but have potential to create new job opportunities and drive economic growth in the region.

Krystian Slodzinka, Project Bid Manager and Polish Ministry Coordinator, Energy Systems at DNV: "Building upon DNV's extensive experience in certifying renewable energy projects, it brings us great satisfaction to expand our certification expertise to Poland following the announcement earlier this year, that DNV has been authorized by the Polish Ministry of Infrastructure to issue certificates for offshore wind farms and assembly of power output equipment. The certification of Baltyk II and Baltyk III by DNV further solidifies their commitment to meeting the highest industry standards for safety, reliability, and sustainability. I am personally looking forward to continue working on this project and to a successful outcome".

Source: DNV

EVENT

Offshore Wind Poland Conference coming up on November 21-22 in Warsaw!

14/09/2023

The coming years will be crucial for offshore wind development. How we use the potential of the Polish Baltic depends on the cooperation of all stakeholders, from investors to suppliers. Global offshore is accelerating, and Poland is not lagging behind. The most up-to-date topics and studies will be discussed at the forum during an event that has already become a permanent fixture on the wind industry calendar – the Offshore Wind Poland 2023 Conference.

Last year's PWEA report estimated the potential of OWE at 33 GW. The report also identified 20 new areas in the Polish part of the Baltic Sea, including 18 in the exclusive economic zone and two in the territorial sea. If the total potential of the Baltic Sea is exploited, offshore wind power could meet as much as 57% of Poland's total electricity demand, and local content could reach 65%, which undoubtedly represents an opportunity for the Polish economy.

Offshore wind energy is gaining steam....

Offshore Wind Poland is a unique meeting that will be attended by key players in the offshore wind energy sector. The event will bring together investors, contractors, service providers, industry associations and politicians making decisions on offshore wind farm development. Thanks to cooperation between government and business, Poland can become an offshore leader in the Baltic and an exporter of cheap and clean energy.

Poland's Largest Offshore Wind Energy Conference features discussions, comments from industry experts and studies that point to specific directions and changes needed to be implemented in order for the offshore sector to develop dynamically in Poland. The assumed increase in the capacity of offshore wind farms from 5 to 12 GW, which will be built by 2030, is a landmark step towards the dynamic development of the new sector in Poland – although the industry knows very well that the potential of the Polish Baltic Sea is much greater! This year we will talk about what is needed to make the most of Poland's potential, both in terms of energy production and the industrial and service potential of domestic companies.

Conference participants will learn the conclusions of the latest report by the Polish Wind Energy Association, which will identify legislative proposals to facilitate and expedite permitting processes for offshore. The industry's demands based on foreign experience will help optimize Poland's permitting system and unleash the wind projects waiting in the starting thresholds.

Take part in forum discussions on the future of Polish offshore wind farms and confront your position and ideas with the industry at thematic Roundtables. Become an active player in the offshore market in Poland! We invite you to register for the Offshore Wind Poland Conference on November 21-22 in Warsaw. www.konferencja-offshore.pl

BalticWind.EU provides media patronage for the conference.

Source: PWEA

EDUCATION

They will get students into wind turbines – the first such project in Poland

15/09/2023

On Wednesday, September 13, a training project was officially launched for students of the Maritime School Complex in Darłowo, who will gain free certificates to work on wind turbines. The first training project initiated by Vulcan Training & Consultancy and the Polish Wind Energy Association worth more than PLN 1 million is being launched. This is in response to the growing demand for new, specialized workers in the wind sector. The project "Get into the wind turbines and work at the highest level!" opens a career path for young people in what is currently the most promising wind energy industry.

Due to the development of offshore wind energy, there is a need for new specialized workers, among others technicians and wind turbine installers. Companies in Poland and around the world are looking for employees with varying levels of specialization and competence. Specialized education and training play a big role. Market needs and attractive, well-paying jobs are the best motivation to educate in this direction.

"Get into the wind turbines and work at the highest level!" is a first-of-its-kind training program that will realistically equip young people to work in today's most promising wind industry. Thanks to it, students from Darłowo will undergo a full training package and acquire the necessary licenses to work on wind turbines. This venture is worth a total of more than 1 million zlotys and is the brainchild of the Vulcan Training & Consultancy training center and the Polish Wind Energy Association.

– Students who undergo training will earn Global Wind Organization certificates confirming their competence, which has a significant value in the market, reaching nearly 20,000 zlotys per person. Our project is the first and only such initiative in Poland, which opens the door to young people's careers and allows them for a good start in the labor market – emphasizes Artur Ambrożewicz, CEO at Vulcan Training & Consultancy.

It is estimated that in the future onshore wind energy could create up to 97,000 new jobs, depending on the development scenario. Offshore wind energy, meanwhile, will offer another 100,000 jobs in Poland.

Janusz Gajowiecki during the inauguration of the project; Photo: PWEA

– The wind energy labor market is gaining momentum. The wind industry offers its employees excellent salaries, opportunities for continued growth and uninterrupted employment for many years. Wind power is part of a powerful industry, and where there's electricity there's money. In Poland, about 10,000 people are directly employed in the construction and operation of onshore wind power plants, and about 20,000 including related sectors – points out Janusz Gajowiecki, President of the Polish Wind Energy Association.

"Get into the wind turbines" is a program dedicated to the students of the Maritime School Complex in Darłowo. Two training packages of 3 and 5 days covering a total of 9 courses conducted by Vulcan Training & Consultancy await the young people who will participate in the project.

– Participation in this project is clearly an opportunity for young people. Investing in one's skills and competencies is the best possible decision at the stage of entering the job market, and the dynamic development of wind energy in Poland and around the world shows that this field of education is future-proof. I am glad that it was the students of my school that got this opportunity – notes Magdalena Miszke, Director of the Maritime School Complex in Darłowo.

The first training of students will begin as early as October this year.

Source: PWEA

COOPERATION

N-Sea Polska and MAG Offshore are jointly developing Marine Coordination Centre's (MCC)

18/09/2023

N-Sea Polska and MAG Offshore are jointly developing Marine Coordination Centre's (MCC) for Poland and the Baltics. With this approach the parties will share the relevant knowledge, experience, equipment, vessels and port facilities to serve our clients needs during the developing and operating phases of their offshore wind farms across the Baltic Region.

The proposed MCC concept includes, but is not limited to, the following services and resources:

- ISPS approved Port Facility
- Geophysical & Geotechnical Survey
- UXO Survey, ID & Clearance
- Subsea IRM & Construction
- Subsea Cable Repair & Installation
- Cable Lay / Storage & Repair
- Marine & Port Logistics
- CTVs
- Port, Vessel & OWF Security
- Training & Development
- Offshore Emergency Response

Our plan is to provide subject services, initially for our strategically located Władysławowo port facility, with a further growth in Darłowo (along the Polish coastline).

Source: MAG Offshore

PROJECTS

Northland Power Announces Signing of Credit Agreement for $5.2 Billion Project Financing at Baltic Power Offshore Wind Project

19/09/2023

Northland Power Inc. ("Northland" or the "Company") (TSX: NPI) along with its partner, Orlen S.A. ("Orlen"), today announced that its Baltic Power offshore wind project ("Baltic Power" or the "project") in Poland has signed a credit agreement to secure an equivalent of $5.2 billion of non-recourse green financing that adheres to Northland's green financing framework covering construction and a 20-year term.

The non-recourse project financing will be provided by 25 international and local commercial banks, and multiple Export Credit Agencies and multi-lateral agencies. The project is expected to reach financial close in the coming days, upon satisfaction of all relevant conditions precedent to the financing being achieved.

"Today's announcement is a major achievement for Northland, our partners and the Baltic Power project," said Mike Crawley, President and Chief Executive Officer of Northland. "This milestone demonstrates the support from the global financial community and reflects their confidence in Northland and our ability to develop, procure, construct and finance large and complex offshore wind projects. Despite the recent challenges for the offshore wind sector in some markets, Northland continues to find a way to advance large-scale offshore wind projects with attractive economics."

"This financing is Northland's first offshore wind project in Poland," said Pauline Alimchandani, Northland's Chief Financial Officer. "We would like to thank all stakeholders for working together to achieve this significant milestone. Once operational, Baltic Power will be Northland's fourth offshore wind project in Europe and will provide significant high quality, inflation-protected, long-term contracted Adjusted EBITDA and Free Cash Flow to our business and shareholders."

Northland has been co-developing Baltic Power with Orlen, since acquiring a 49 per cent equity stake in the project in 2021. The project financing amount of $5.2 billion represents 80 per cent of Baltic Power's $6.5 billion projected total capital cost (inclusive of contingencies). The remaining capital will be contributed by the project partners at financial close and has already been secured. Northland's share of equity for the project was fully secured through the green hybrid bond issuance in June 2023 and existing corporate liquidity. Northland's interest in Baltic Power is expected to generate a five-year average Adjusted EBITDA (a non-IFRS measure)1 of approximately $300 to $320 million and $95 to $105 million of Free Cash Flow (a non-IFRS measure)1per year once operational, delivering significant long-term cash flow for the Company's shareholders.

[1]See Non-IFRS Financial Measures and Forward-Looking Statements below.

The project's 25-year CfD offtake agreement is Euro-pegged and includes an inflation indexation feature commencing with a base year of 2021, providing offsetting benefits to the higher inflationary price pressures recently experienced. Further optimization opportunities will be pursued during and after the construction period, which include: future optimizations the long tenor CfD offers, operating cost improvements and construction execution efficiencies. The project has secured a 15-year operations and maintenance agreement with the turbine supplier, with options to extend.

The project is located in the Baltic Sea, approximately 22 kilometres off the Polish coast near Plaża Wydmy Lubiatowskie and has obtained all environmental approvals and major construction permits. Construction activities have commenced, with fabrication of certain key components underway. Full commercial operations are expected in the latter half of 2026. Once operational, Baltic Power will be amongst the largest offshore wind projects globally. It is expected to provide clean energy to over 1.5 million Polish households and will play an important role in helping Poland achieve its renewable energy targets where installed capacity of offshore wind energy is expected to reach up to 11 GW by 2040.

Baltic Power has entered into interest rate hedges that cover the full loan amortization period and provide an effective all-in interest rate of approximately 5 per cent. In addition, Northland has entered into currency hedges to stabilize the Canadian dollar equivalent for the majority of its projected distributions through 2038 and will enter into additional hedges on an ongoing basis, in line with the Company's risk management strategy. Baltic Power's major supply and construction contracts are denominated in Euros to match the currency of financing, with 95% under fixed price contractual structures.

(C$)	Total Project	Northland's Interest*
Capacity	1,140 MW	559 MW
CfD Tenor	25 Years	n/a
Total Capital costs	$6.5 billion	$3.2 billion
Non-Recourse Project Financing	$5.2 billion	$2.5 billion
Total Equity (excluding pre-completion revenues)	$1.3 billion	$0.75 billion
5-year Average Annual Adjusted EBITDA (a non-IFRS measure)[2]	n/a	$300 - $320 million
5-year Average Annual Free Cash Flow (a non-IFRS measure)[2]	n/a	$95 - $105 million
Estimated annual net production	4,400 GWh	n/a
Non-Recourse Debt Term	20 years	n/a
Non-Recourse Cost of Financing	5.0%	n/a

[2]See Non-IFRS Financial Measures and Forward-Looking Statements below.

* Northland's interest reflective of 49 per cent ownership. Assumed average EUR/CAD exchange rate at 1.53 in the first five years of operations. The 2021 CfD tariff of PLN 319.6/MWh (equivalent to EUR 71.8/MWh) with CfD price pegged to EUR at 4.45 PLN/EUR. In 2022, CfD changed from Polish Zloty to Euro denominated currency. Indexation base year moved up one year to 2022 using 2021 CPI. Northland's equity includes amounts paid to acquire the original 49% stake in Baltic Power, and amount to approximately $0.1 billion.

NON-IFRS FINANCIAL MEASURES

This press release includes references to the Company's adjusted earnings before interest, income taxes, depreciation and amortization ("Adjusted EBITDA"), Free Cash Flow, which are measures not prescribed by International Financial Reporting Standards ("IFRS"), and therefore do not have any standardized meaning under IFRS and may not be comparable to similar measures presented by other companies. Non-IFRS financial measures are presented at Northland's share of underlying operations. These measures should not be considered alternatives to net income (loss), cash flow from operating activities or other measures of financial performance calculated in accordance with IFRS. Rather, these measures are provided to complement IFRS measures in the analysis of Northland's results of operations from management's perspective. Management believes that Northland's non-IFRS financial measures are widely accepted and understood financial indicators used by investors and securities analysts to assess the performance of a company, including its ability to generate cash through operations. For a detailed description of each of the non-IFRS financial measures referred to above, including the reconciliations for such non-IFRS financial measure to their most directly comparable IFRS financial measure, see Section 1: Non-IFRS Financial Measures, Section 4.5: Adjusted EBITDA, and Section 4.6: Adjusted Free Cash Flow and Free Cash Flow in our MD&A for the three and six-month periods ended June 30, 2023, which is incorporated by reference and available under the Company's profile on SEDAR+ at www.sedarplus.ca.

FORWARD-LOOKING STATEMENTS

This press release contains certain forward-looking statements including certain future oriented financial information that are provided for the purpose of presenting information about management's current expectations and plans. Northland's actual results could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, the events anticipated by the forward-looking statements may or may not transpire or occur. Readers are cautioned that such statements may not be appropriate for other purposes. Forward-looking statements include statements that are predictive in nature, depend upon or refer to future events or conditions, or include words such as "expects," "anticipates," "plans," "predicts," "believes," "estimates," "intends," "targets," "projects," "forecasts" or negative versions thereof and other similar expressions or future or conditional verbs such as "may," "will," "should," "would" and "could." These statements may include, without limitation, statements regarding Northland's expectations for guidance, the completion of construction, the timing for and attainment of commercial operations, the project's anticipated contributions to Adjusted EBITDA and Free Cash Flow, the expected generating capacity of the project, and the future operations, business, financial condition, financial results, priorities, ongoing objectives, strategies and outlook of Northland and its subsidiaries, all of which may differ from the expectations stated herein. These statements are based upon certain material factors or assumptions that were applied in developing the forward-looking statements, including the design specifications of development the projects, the provisions of contracts to which Northland or a subsidiary is a party, management's current plans and its perception of historical trends, current conditions and expected future developments, as well as other factors, estimates, and assumptions that are believed to be appropriate in the circumstances. Although these forward-looking statements are based upon management's current reasonable expectations and assumptions, they are subject to numerous risks and uncertainties. Some of the factors include, but are not limited to, risks associated with sales contracts, Northland's reliance on the performance of its offshore wind facilities at Gemini, Nordsee One and Deutsche Bucht for approximately 50% of its Adjusted EBITDA and Free Cash Flow, counterparty risks, impacts of regional or global conflicts, contractual operating performance, variability of sales from generating facilities powered by intermittent renewable resources, offshore wind concentration, natural gas and power market risks, commodity price risks, operational risks, recovery of utility operating costs, Northland's ability to resolve issues/delays with the relevant regulatory and/or government authorities, permitting, construction risks, procurement and supply chain risk, project development risks, disposition and joint venture risk, competition risks, acquisition risks, financing risks, interest rate and refinancing risks, liquidity risk, credit rating risk, currency fluctuation risk, variability of cash flow and potential impact on dividends, taxation, natural events, environmental risks, climate change, health and worker safety risks, market compliance risk, government regulations and policy risks, utility rate regulation risks, international activities, cybersecurity, data protection and reliance on information technology, labour relations, reputational risk, insurance risk, risks relating to co-ownership, bribery and corruption risk, legal contingencies, and the other factors described in the "Risks Factors" section of Northland's 2022 Annual Information Form, which can be found at www.sedarplus.ca under Northland's profile and on Northland's website at northlandpower.com. Northland has attempted to identify important factors that could cause actual results to materially differ from current expectations, however, there may be other factors that cause actual results to differ materially from such expectations. Northland's actual results could differ materially from those expressed in, or implied by, these forward-looking statements and, accordingly, no assurances can be given that any of the events anticipated by the forward-looking statements will transpire or occur, and Northland cautions you not to place undue reliance upon any such forward-looking statements.

The forward-looking statements contained in this release are based on assumptions that were considered reasonable as of the date hereof. Other than as specifically required by law, Northland undertakes no obligation to update any forward-looking statements to reflect events or circumstances after such date or to reflect the occurrence of unanticipated events, whether as a result of new information, future events or results, or otherwise.

Source: Northland Power

PROJECTS

Budimex with contract to build terminal in Swinoujscie

20/09/2023

Budimex has signed a contract for the construction of an installation terminal for offshore wind farms. The general contractor will execute the land part of the investment for a sum of more than PLN 118 million. The project is the responsibility of Orlen Group, which wants to build the first in Poland, and simultaneously one of the most modern, installations of this type in Europe. Construction is scheduled to be completed by the end of December 2024.

The task of this WTIV (wind turbine installation vessel) terminal will be to handle, store and assemble wind tower sections with foundations and other wind turbine components. Among other things, the investment will enable the construction of Baltic Power's first offshore wind farm with an installed capacity of 1140 MW located in the waters of the Polish exclusive economic zone. As the investor declares, due to the fact that the availability of this type of equipment is limited in the Baltic Sea, the Polish terminal will serve investments carried out in German, Swedish and Danish waters.

As part of the contract signed with Orlen Neptun II on Friday, September 8, Budimex will carry out the onshore part of the investment. Among other things, it will create storage areas for offshore wind turbine components, such as towers, blades and nacelles. A total area of about 17 hectares will also be used to build communications infrastructure, as well as a new administration and office building.

"The execution of the contract will involve, among other things, earthworks such as leveling the site, transporting aggregate and laying it out. We will also carry out from scratch all work related to the construction of administrative and office premises, a warehouse and parking lots. The work will take 17 months" – says Jakub Długoszek, Director of Infrastructure Construction at Budimex.

Budimex has recently completed several important investments in the West Pomeranian province. At the end of August, the Przecław and Warzymice bypass, which is crucial for the residents of Szczecin, was handed over 7 months ahead of schedule. The 4-kilometer section significantly improved not only local traffic, but also shortened travel time from Szczecin to the Tricity.

Since recently, Szczecin residents have also been able to use 5 modern stages, with a total capacity of nearly 1,000 spectators, of the new Polish Theater building. This architecturally and structurally unique project was commissioned in early August. More information here: https://media.budimex.pl/pr/817796/budimex-zakonczyl-rozbudowe-teatru-polskiego-w-szczecinie

These are not all Budimex's investments in the area. In July this year, 9 new stations for electric vehicles were put to use for the residents of Szczecin, and within the next year construction work will be completed on one of the largest infrastructure investments in the region – a bridge over the Regalica River.

Source: Budimex

PROJECTS

Szczecin Shipyard “Wulkan” will participate in the European supply chain

21/09/2023

Szczecin Shipyard “Wulkan” hereby announces its involvement in the construction of the 1000 MW THOR offshore wind farm owned by RWE. Based on a recently signed agreement with Dajin Offshore, the “Wulkan” Shipyard is responsible for the delivery of internal platform packages.

“Wulkan”‘s plant is well equipped for both intermediate and large steel structures.

“We are satisfied and proud to be part of the Thor Wind Farm construction team. This is a great opportunity for our shipyard and team to further develop their competencies ahead of upcoming new challenges and offshore projects” – said Marek Opowicz, Chairman of the Board, Managing Director of the Szczecin Shipyard “Wulkan”.

About the Szczecin Shipyard “Wulkan”

Szczecin Shipyard “Wulkan” is a large shipyard located in Western Pomerania, south of the Baltic Sea. The shipyard is a supplier operating worldwide in the production of steel structures for the marine, offshore and onshore industries. “Wulkan” Shipyard’s strategy is strongly linked to its key assets, which are dedicated to complete large ships and steel structures with unit weights of up to 4,500 tons. As part of the offshore wind yard plan, construction of offshore wind substations, as well as other large-scale offshore components for the European and US markets, is planned. The shipbuilding business will focus on the commercial fleet, as well as offshore wind energy vessels such as “Walk to Work” vessels.

Key strengths of the shipyard:

- 1 Platform for assembly and loading of roro or SPMT up to 4,500 tons,
- 2 semi-dry slipways for new shipbuilding,
- 600 m of wharves for outfitting and loading,
- 10,000 m2 of FROSIO-certified shot blasting and painting halls,
- 80,000 m2 of production halls with overhead cranes with a capacity of 60-240 tons.

Source: Szczecin Shipyard “Wulkan”

PROJECTS

Poland: InvestEU – EIB supports one of the world's largest wind farms with €610 million in financing

22/09/2023

The project on the Baltic Sea will be developed by Baltic Power, with EIB financing backed by InvestEU. Poland will join Denmark and Germany in harnessing the clean energy potential of Baltic Sea basin. Once finished in 2026, the wind farm will generate nearly 4 200 GWh of clean energy annually.

The European Investment Bank (EIB) has signed an agreement to co-finance the construction of Poland's first offshore wind farm — one of the largest in the world — with a loan of up to €610 million. The project will be completed by a consortium led by the LLC Baltic Power. This flagship investment will help accelerate Poland's decarbonisation and boost energy security. €350 million if it are backed by the InvestEU programme, which aims to mobilise investment for EU policy priorities, including the green transition.

The project is of strategic importance, and will also further the objectives of the REPowerEU plan by rolling out clean energy capacity to strengthen EU energy independence and security of supply. Speeding up the green transition and promoting investment in renewable energy are priorities of REPowerEU that are also promoted and supported by the EIB Group.

"Financing for Baltic Power will support the first offshore wind farm project in Poland, and will certainly open the way for the green transformation and other future offshore wind energy projects," stated EIB Vice-President Teresa Czerwińska. "Not only will this investment support the transformation of the Polish energy sector, but it will also create new jobs and strengthen economic development. Thanks to this financing, one of the largest wind farms in the world will be built, and Poland will join the countries investing in renewable energy sources in the Baltic Sea."

The Baltic Power offshore wind farm operation will be the EIB's first offshore wind farm in Poland. It is expected to be completed by end of the second quarter of 2026. The project consists of 76 wind turbines, their foundations, two offshore substations and one onshore substation, and four export cables and inter-array cables, with an overall installed capacity of approximately 1 140 MW. It will be located 23 km north of the Polish coastline, within the exclusive economic zone of Poland.

With this project, Poland will join Germany and Denmark in the group of EU countries successfully operating offshore wind in the Baltic Sea basin.

Baltic Power is owned by ORLEN (51% ownership) and Northland Power (49% ownership), and is devoted solely to this wind farm project. The EIB is providing a direct loan to Baltic Power, as well as an intermediated tranche for project-related on-lending made available to the Polish national promotional bank Bank Gospodarstwa Krajowego.

"As a development bank, we have been involved in financing Poland's energy transition for years. Last year alone, we allocated PLN 100 billion to support the domestic low- and zero-emissions energy sector. We see potential in improving Poland's energy mix, including by developing offshore wind energy. That is why we have decided to co-finance the construction of the first Polish wind farm in the Baltic Sea — one of the largest investments of this type in the world — which has now entered the implementation phase. Such an investment lends impetus to the domestic industry and is an opportunity for Polish entrepreneurs," said Marek Tomczuk, member of the Management Board at BGK.

PKN ORLEN is the largest and most modern multi-utility conglomerate in Central Europe, operating in the region and on international markets. Northland Power is an independent power producer founded in 1987 and listed on the Toronto Stock Exchange. Northland Power owns and manages a diversified-generation mix of clean and renewable energy sources.

"Today's announcement is a major achievement for Northland, our partners and the Baltic Power project," said Mike Crawley, CEO and President of Northland. "This milestone demonstrates the support from the global financial community, and reflects their confidence in Northland and our ability to develop, procure, construct and finance large and complex offshore wind projects. Despite the recent challenges for the offshore wind sector in some markets, Northland continues to find a way to advance large-scale offshore wind projects with attractive economics."

"We are in the final stages of preparing a large-scale project that will significantly change Poland's energy mix. Our robust financial footing and extensive international experience in managing large-scale projects equip us to handle this process effectively. Despite the highly dynamic environment, we are on track in the preparation of the Baltic Power project, with the goal of providing clean energy to more than 1.5 million households as early as 2026. Securing financing for the project demonstrates that the financial markets also have a positive view of ORLEN's strategic investments through 2030," noted Daniel Obajtek, CEO and President of the ORLEN Management Board.

In 2022 the EIB Group made global commitments of €20.86 billion to support the sustainable development of energy sources. In Poland this financing reached €996 million, with a total of €3.25 billion earmarked to help transform the country's energy sector between 2018 and 2022.

The EIB and energy security

Over the past decade, the EIB Group has channelled more than €100 billion into the EU energy sector. These timely investments are now helping Europe weather the crisis triggered by the abrupt cut in Russian gas supplies. In 2022 the EIB signed financial support totalling more than €17 billion for projects in energy efficiency, renewables, electricity and storage inside the European Union, strengthening the resilience of the European economy.

In July, the EIB's Board of Directors decided to raise the group's clean energy financing volumes to unprecedented levels in support of the REPowerEU objective of phasing Europe's dependency on Russian fossil fuel imports by fast-forwarding the clean transition. An additional €45 billion will be invested over the next five years, on top of the EIB's already robust support for the energy sector in the European Union. It is estimated that the REPowerEU package will mobilise an additional €150 billion in additional investment by 2027, thus making a substantial contribution to Europe's energy independence and the EIB Group's target of mobilising €1 trillion in climate financing this decade.

The InvestEU programme provides the European Union with crucial long-term funding by leveraging substantial private and public funds in support of a sustainable recovery. It also helps mobilise private investments for the European Union's policy priorities, such as the European Green Deal and the digital transition. The InvestEU programme brings together under one roof the multitude of EU financial instruments currently available to support investment in the European Union, making funding for investment projects in Europe simpler, more efficient and more flexible. The programme consists of three components: the InvestEU Fund, the InvestEU Advisory Hub and the InvestEU Portal. The InvestEU Fund is implemented through financial partners that will invest in projects using the EU budget guarantee of €26.2 billion. The entire budget guarantee will back the investment projects of the implementing partners, increasing their risk-bearing capacity and mobilising at least €372 billion in additional investment.

Source: European Investment Bank

COOPERATION

Dutch offshore sector bets on cooperation in Poland and Lithuania

22/09/2023

The success of ambitious offshore plans in fast-emerging markets such as Poland and Lithuania depends on leveraging the best available European sector experience in building and operating wind farms. Cooperation is the key to building local value chains. This is the main message from the Trade Mission of 20 Dutch companies to Lithuania and Poland over the past 4 days.

The companies participated in a seminar organized by the Embassy of the Kingdom of the Netherlands in Lithuania with support from with support from Klaipėda Investment Promotion Agency and in which the CEO of Ignitis Lietuva participated, which is the proposed developer of the first project in Lithuania. Also a matchmaking session took place with 78 meetings.

Linkedbyoffshorewind, a partnership between the government and the offshore wind private sector from the Netherlands, was International Partner of this year's 12th International Conference "Offshore Wind – Logistics & Supplies" organized by Polish Offshore Wind Energy Society (PTMEW) in Gdynia, Poland. Event partners and panelists during the two days of debates included representatives from Dutch companies such as Damen, Smulders, Ventolines and Corrosion that shared their practical views on offshore wind development. N-Sea and MAG Offshore presented their plans for jointly developing offshore marine coordination centres in the Baltic region.

Participants of the conference took part in fifty individual matchmaking meetings with the Dutch companies. Topics for debate were the long-term strategy of local supply chain building. Also ongoing procurement procedures for the first 5.9 GW projects in Poland, as well as role of state, banks, investors during II phase – were discussed.

Source: LinkedbyOffshoreWind

PROJECTS

EBRD to extend a €140 million loan to Baltic Power

25/09/2023

The European Bank for Reconstruction and Development (EBRD) is supporting the development of Poland's renewable energy capacity by extending a €140 million loan to Baltic Power to finance the construction of the country's first offshore wind farm.

The EBRD's financing is provided alongside that from a large number of international and local commercial lenders, the European Investment Bank (EIB) and export credit agencies.

Once operational, the wind farm, which will have a capacity of up to 1.2 GW, is expected to generate electricity equivalent to 4,000 GWh or approximately 2-3 per cent of Poland's current electricity generation. It will help to avoid approximately 2.8 million tonnes of CO2 emissions annually. The project is a landmark transaction for the EBRD, central Europe and Poland, representing a significant step in the transformation of Poland's energy sector.

Poland has committed to substantial decarbonisation goals and, in line with the wider European energy sector, is targeting offshore wind power to increase electrification and reduce its coal-fired energy generation.

Nandita Parshad, Managing Director of the EBRD's Sustainable Infrastructure group, said: "Offshore wind energy is crucial to support the global drive to net zero and to provide a solution to energy security concerns. This is why we are proud to support this landmark project: the very first offshore wind farm not only in Poland, but in the entire EBRD region. The acceleration of the green transition is a primary focus for the EBRD, and this project is a sterling example of how we can scale up renewables from megawatts to gigawatts."

Baltic Power is a special purpose vehicle incorporated in Poland to develop, build and operate the wind project in the Baltic Sea. It is jointly owned by ORLEN, the Polish multi-utility company, and Northland Power, a Canadian independent power producer with significant experience in offshore wind.

"Today's announcement is a major achievement for Northland, our partners and the Baltic Power project," said Mike Crawley, President and Chief Executive Officer of Northland Power. "This milestone demonstrates the support from the global financial community and reflects their confidence in Northland and our ability to develop, procure, construct and finance large and complex offshore wind projects. Despite the recent challenges for the offshore wind sector in some markets, Northland continues to find a way to advance large-scale offshore wind projects with attractive economics."

Daniel Obajtek, CEO and President of the ORLEN Management Board, noted: "We are in the final stages of preparing a large-scale project that will significantly change Poland's energy mix. Our robust financial footing and extensive international experience in managing large-scale projects equip us to handle this process effectively. Despite the highly dynamic environment, we are on track with the Baltic Power project's preparation, with the goal of providing clean energy to more than 1.5 million households as early as 2026. Securing financing for the project demonstrates that the financial markets also have a positive view of ORLEN's strategic investments through 2030."

The EBRD is a leading institutional investor in Poland. To date the Bank has invested more than €13 billion in 505 projects across the country.

Source: European Bank for Reconstruction and Development

TECHNOLOGY

RWE and FRS Windcat Polska present a hydrogen-powered CTV unit to transport offshore wind farm crews

26/09/2023

RWE and FRS Windcat Polska presented the Hydrocat 55, one of the world's first dual-fuel crew transport vessels (CTV), in the port of Ustka. It is a dual-fuel, MDO-fueled unit that can also run on hydrogen, significantly reducing CO2 emissions.

In the presence of Jacek Maniszewski, Mayor of the City of Ustka, representatives of local authorities, the fishing community, shipyard and port had the opportunity to see the innovative CTV unit, which moored at the Władysławowo wharf, from which RWE plans to carry out servicing work in the future. RWE intends to use the port of Ustka as an operations and service base for F.E.W. Baltic II, its first offshore wind farm in Polish Baltic waters.

Jacek Maniszewski, Mayor of the City of Ustka: "Offshore wind energy is crucial to Poland's energy transition. Ustka, as a port city, will play an important role in the construction and operation stages of offshore projects in the Baltic. The visit organized by RWE proved that our port is ready to handle offshore wind farms."

The Hydrocat 55 has dual-fuel engines (diesel and hydrogen) with 200 kg of hydrogen, which will enable the replacement of nearly 600 liters of diesel fuel. The fuel is stored in 27 cylinders at a pressure of 350 bar. Depending on the range of tasks to be performed, this amount of hydrogen allows the ship to operate for up to three days. The technology used allows an annual reduction of 220,000 liters of diesel fuel consumption and nearly 600 tons of CO2 emissions.

Tim Kunstmann, Managing Director at FRS Windcat Polska: "The technology used is suitable for the CTV primarily because it allows the use of existing diesel engines. No fundamental changes are required to the main engine, which means maintenance and repairs are not complicated, and the engine can be easily converted back to diesel without any modifications. Even if hydrogen is not available, the vessel can run on traditional fuel, making it a reliable solution for offshore wind power. The Hydrocat 55 vessel will be operational by the end of 2023. Its sister unit Hydrocat 48 has been in operation since last year and operates offshore wind farms in the Netherlands, Belgium and the UK."

Grzegorz Chodkowski, Vice President of Offshore Development Poland at RWE: "Shipping accounts for about three percent of annual global greenhouse gas emissions. We are convinced that offshore wind energy will significantly contribute to the decarbonization of shipping and maritime transportation. The solution proposed by FRS Windcat can be seen as a milestone in the development of fully hydrogen-powered CTV units. RWE operates 19 offshore wind farms in five countries. More offshore projects are under construction and development – including the F.E.W. Baltic II project in Poland. We are committed to ensuring that our service providers offer carbon-neutral solutions throughout the lifetime of our offshore wind farms.".

F.E.W. Baltic II – RWE's first offshore wind farm off the coast of Poland

RWE is developing its first offshore wind farm off the coast of Poland. The F.E.W. Baltic II project is located north of Slupsk Bank, in the exclusive economic zone in the central part of the Polish Baltic Sea. With a planned installed capacity of 350 megawatts, the wind farm will be able to produce enough green energy to power about 350,000 households. We are continuing to develop the project, work is underway and its commissioning is expected by the end of this decade.

Source: RWE

PROJECTS

Vestas wins 1,140 MW offshore order for V236-15.0 MW wind turbines in Poland

28/09/2023

Vestas has secured a 1,140 MW firm order from Baltic Power Sp. z o.o, a joint venture between ORLEN S.A. and Northland Power Inc, for the Baltic Power Offshore Wind Project in Poland. The firm order announcement is in reference to Vestas' Company Announcement 16/2023 of 28 September 2023.

Vestas will supply, install, and commission 76 V236-15.0 MW wind turbines for the Baltic Power project. Upon completion, Vestas will service the turbines under a 15-year Active Output Management 5000 (AOM 5000) service agreement designed to ensure optimised performance of the assets.

"Vestas, ORLEN, and Northland Power share a common vision for the energy transition in Poland and we are very pleased to deliver our wind turbines and our knowledge for this landmark project in the Baltic Sea," says Nils de Baar, President of Vestas Northern & Central Europe. "The V236-15.0 MW is built on world-class technology, and we are proud that this turbine has been chosen to power the largest single wind project in Poland to date. Our thanks go to the Baltic Power team for their excellent collaboration and professionality".

The project site is located 23 kilometres off the coast of the Polish Baltic Sea shoreline, near Łeba. Delivery of the wind turbines is expected to begin in the first quarter of 2025, with commissioning expected in 2026.

Source: Vestas

PROJECTS

Signing of foundation contracts for Bałtyk II and III OWF postponed until January 2024

29/09/2023

Polenergia announced in a press release that the project companies OWF Bałtyk II sp. z o.o. and OWF Bałtyk III sp. z o.o., in which Polenergia and Equinor each hold a 50% stake, signed on September 29, 2023 with SIF Netherlands B.V. – a supplier of annexes for monopal foundations.

"The object of the annexes is to change the assumed date for signing contracts for the production of monopiles for projects (...) to January 15, 2024. The reason for the change of the Final Date is the ongoing negotiations of the Final Agreements. The change of the Final Date does not affect the implementation schedule of the Projects."

Source: Polenergia

COOPERATION

SeaRenergy Offshore to develop offshore substation design for BC-Wind

30/09/2023

Ocean Winds Polska and the Polish branch of SeaRenergy Offshore Holding GmbH have signed a contract to develop the conceptual design, construction permit design documentation and obtain an occupancy permit for an offshore substation for the BC-Wind project.

The scope of the contract includes the development of a conceptual design for an offshore substation, together with an electrical design as the basis for obtaining a construction permit, as well as the development of the documentation necessary to submit an application and obtain a construction permit.

Cooperation on the project began in August 2023. BC-Wind will begin operations in 2027.

Source: BC-Wind

Quarterly Country Report Poland Q4 2023 already in January!

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