



II phase of Polish offshore
- key decisions


Serock 2023
- summary of the PWEA
conference

**Development of offshore
wind farm projects**

Strategic partners:



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Dear Readers,

I am pleased to present you with the next in a series of reports summarising the Polish offshore wind market. In Q2 2023, the energy topics continued to be dominated by initiatives emphasising the need to accelerate decarbonisation and the development of RES projects, including the construction of offshore wind farms to strengthen energy security - as a response to Russia's war in Ukraine.

In this report, we continue to present the development of offshore wind farm projects, as well as the most important developments for the industry. Certainly, among the topics worth highlighting are the successive settlements of the awarded sites within the second phase of the Polish offshore. In addition, we report on the largest event for the wind sector in Central and Eastern Europe - the annual conference of the Polish Wind Energy Association held in Serock. The subject of offshore wind energy is becoming more and more important every year - not only from the perspective of investment, but also the potential of individual technologies, financing issues or necessary regulatory changes.



This year BalticWind.EU was not only a media patron of the event, but we also supported a debate on the future of cPPA for offshore wind projects organized by RE-Source Poland Hub.

I encourage you to read on!

Paweł Wróbel
Managing Director, BalticWind.EU

PWEA: All eyes on offshore



Offshore wind energy is one of the main pillars of Poland's energy transition. According to a PWEA report, Poland has an offshore wind potential of 33 GW, and the Polish part of the Baltic Sea has many new areas for offshore investment. If all this potential is used, offshore wind energy could satisfy 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. This could make Poland a leader in offshore wind energy development in the Baltic Sea region and in Europe. Polish companies, foreign investors and representatives of the Baltic Sea countries discussed cooperation to build a strong European offshore industry during the PWEA conference in Serock.

Prepared by the Ministry of Climate and Environment, the new scenario for Poland's Energy Policy until 2040 (PEP2040) assumes a fourfold increase in capacity from RES: 68% of the installed capacity in the National Electricity System and more than 50% of the share in electricity production. Offshore wind power is expected to account for 5.9 GW in 2030 and 18 GW in 2040. However, experts see a much greater potential for the Polish offshore sector, which could reach up to 33 GW. Making the best use of the potential of the Polish part of the Baltic Sea will be crucial in the coming years to build our independence and a strong economy.

This new perspective and investments will require a strong commitment from investors, the state and financial resources in order to be effectively realised. Therefore, the Polish Wind Energy Association invited companies interested in the development of the offshore sector to the International Supplier Day during the PWEA2023 Conference in Serock. During the event, special emphasis was placed on building a strong European supply chain for the offshore sector and creating a framework for international cooperation in this area. It was an opportunity for Polish companies to establish business contacts

with foreign partners and thus a chance to enter Western markets.



- The development of offshore wind energy in Poland brings great opportunities to build a high position for Polish entrepreneurs in the regional, European and global offshore value chain. Creating effective alliances with experienced foreign partners will help to build a strong offshore wind energy sector in Poland in a cost-optimised way and by supporting the domestic industry, says Janusz Gajowiecki, President of the Polish Wind Energy Association.



In order to improve the quality of practical education and intensify research and development activities in the field of wind energy, an agreement was signed during the PWEA Conference between PWEA and the Maritime University of Technology in Szczecin. Both entities declared their cooperation to improve the quality of practical education and intensify research and development activities.

Polish Wind Energy Association (PWEA).

Kamil Kobyliński: There's no hydrogen without offshore, TotalEnergies is ready to invest in Polish offshore and hydrogen



Kamil Kobyliński, Head of Offshore Poland at TotalEnergies

Green hydrogen is essential for Poland's energy transition, argued Kamil Kobyliński of TotalEnergies Poland during the annual PWEA conference, held in Serock on June 20-22. BalticWind.EU was a media partner of the event.

Kamil Kobyliński, Head of Offshore Poland at TotalEnergies during the debate "Green Hydrogen Production from Offshore Wind Farms" presented what role his company can play in Poland's energy transition.

"The slogan - there's no hydrogen without offshore - may sound over the top, but there is a lot of truth in it. There is no transformation of our economy without large-scale RES" - said Kobyliński, stressing the importance of the renewable energy sector. As he pointed out, in the case of offshore wind energy and green hydrogen, the barrier to enter the market is high. That is why it is so important to create regulations that will encourage investment in these areas.

"I would prefer not to change the current law on offshore promotion, because investors who won locations for the construction of farms in the Polish Baltic Sea in the II phase should focus on acquiring partners and implementing projects. Any potential change means uncertainty and holding up work on projects.

We are therefore keeping our fingers crossed for the ongoing work on hydrogen legislation in the Ministry of Climate and Environment." - said Kamil Kobyliński.

In the opinion of the TotalEnergies representative, it is necessary to develop comprehensive legislation that promotes the production of green hydrogen from RES (including in particular offshore wind - economies of scale) not only in the context of energy utilization, but also as a component for the production of synthetic fuels with their further use in transport.



Another important aspect is the need to improve the country's energy transmission system and build new interconnectors. Otherwise, according to Kobyliński, Poland will not be able to take full advantage of the potential arising from expanding renewable energy.

"If anyone thinks that with 20 GW of offshore in Poland, and at least as much installed capacity in onshore projects (PV and wind) and new nuclear capacity we will be able to effectively dispose of this capacity in our system will be disappointed. Our peak power demand is 27-28 GW, and in 10-15 years it will not be 3-4 times higher whatever we do" - as pointed out by Kobyliński.

According to him, one answer to this challenge is to invest in the grid, building new cross-border interconnectors and developing large-scale energy hubs based on, among others, green hydrogen, a project that requires a lot of financing. However, these costs could be reduced by engaging foreign partners to co-finance, inter alia, the development of offshore wind farms, which would allow some of the domestic funds to be used to invest in transmission.



Flotta Hydrogen Hub. Source: <https://www.flottahydrogenhub.com/green-hydrogen>

Kobylinski stressed the importance of TotalEnergies' experience - "We are a multienergy company listed on the New York Stock Exchange, next year we will be celebrating our 100th anniversary. We come from the petrochemical industry hence the production and use of hydrogen has been familiar to us for years. Hydrogen plays a major role in the context of our company's transformation, which will be fulfilled by decarbonization by 2050 at the latest". The company's goal is to generate 100 GW of electricity from renewable energy sources by 2030, much of which will come from offshore wind farms. In parallel, the company is betting on the development of new fuels such as biomethane, green gas (e-NG "electric natural gas made from hydrogen"), green hydrogen, and, based on this, synthetic fuels or sustainable fuels for transport including aviation. These activities are intended to be complementary, by complementing to generate as many synergies as possible in our integrated value chain.

The company is currently involved in several pioneering projects related to the production and use of green hydrogen in Europe. One is a 40 MW electrolyzer project (which will be increased to 120 MW), powered by a hybrid renewable energy system combining a photovoltaic farm and an onshore wind farm. "In this project, we will produce 5-10 tons of green hydrogen per day, which we will use to produce biodiesel at the La Mede refinery." - Kobylinski said.

In Scotland, TotalEnergies is implementing the Flotta Hydrogen Hub project. - a 500 MW electrolyzer that complements the 2 GW West of Orkney offshore wind farm - supplied by a direct line from this farm. The green hydrogen from the plant is expected to have three uses: it will serve as fuel for a new generation of marine vessels, it will be exported in liquefied form via a special fleet of ships to fuel terminals, and some of the hydrogen produced will also power the UK gas system.

Another project is the “Hydrogen Highway”, an infrastructure of hydrogen refueling stations for heavy transport, which is currently under construction in France, Benelux and Germany. These are commercial projects that demonstrate TotalEnergies' commitment to the practical application of green hydrogen.

TotalEnergies is going further - the company is one of the funders of , the Green Hydrogen Development Fund promoting projects on the use of RES for the production and utilization of green hydrogen. We are also collaborating with the Royal University of Denmark, where researchers will carry out several pilot projects on the production and optimization of the use of green hydrogen.

During the debate, Kamil Kobylński pointed to TotalEnergies' readiness to cooperate with Polish partners who won the proceedings for the construction of the II phase of offshore wind farms in the Baltic Sea. With their experience in offshore wind and hydrogen projects, TotalEnergies argues that it is an ideal partner for future energy transition activities in Poland offering to leverage synergies across the energy transition value chain.

More about TotalEnergies' hydrogen projects:

- [Total and Engie partner to develop France's largest site for the production of green hydrogen from 100% renewable electricity](#)
- [Scotland: Green Investment Group, TotalEnergies and RIDG partner with Repsol Sinopec and Uniper to develop large-scale green hydrogen facility in Orkney](#)
- [TotalEnergies and Air Liquide join forces to develop a network of over 100 hydrogen stations for heavy duty vehicles in Europe](#)
- [TotalEnergies, Air Liquide, VINCI and a Group of International Companies Launch the World's Largest Clean Hydrogen Infrastructure Fund](#)

- [Research: TotalEnergies and the Technical University of Denmark Create a Center of Excellence in Decarbonized Energies](#)

TotalEnergies and renewables electricity

As part of its ambition to get to net zero by 2050, TotalEnergies is building a portfolio of activities in electricity and renewables. By the first half of 2023, TotalEnergies' gross renewable electricity generation installed capacity was 18 GW. TotalEnergies will continue to expand this business to reach 35 GW of gross production capacity from renewable sources and storage by 2025, and then 100 GW by 2030 with the objective of being among the world's top 5 producers of electricity from wind and solar energy.

About TotalEnergies

TotalEnergies is a global multi-energy company that produces and markets energies: oil and biofuels, natural gas and green gases, renewables and electricity. Our more than 100,000 employees are committed to energy that is ever more affordable, cleaner, more reliable and accessible to as many people as possible. Active in nearly 130 countries, TotalEnergies puts sustainable development in all its dimensions at the heart of its projects and operations to contribute to the well-being of people.

The industry prepares to invest in phase II of Polish offshore

One of the main topics of debate during the conference in Serock was the development prospects of the offshore wind energy sector in Poland after the first phase of investment. Aspects of supply chain availability for new projects, including the potential of Polish companies and plans of major developers active on the Polish market, were discussed.

The PWEA conference on June 20-22, which as every year was held in Serock, is the largest wind industry event in the CEE region. One of the main topics of discussion was offshore. During the debate "Offshore wind – a new opening. What is needed for Phase II?", the President of the Management Board of PGE Baltica Arkadiusz Sekściński admitted that the company is focusing on building competence in its partnership with Denmark's Orsted, with which it is developing Baltica II and III projects with a total capacity of more than 2.5 GW. It is worth mentioning that one of the new sites awarded to PGE was obtained in a joint application with Orsted - it concerns area 45.E.1 adjacent to the Baltica 2 farm. However, as President Sekściński admitted for PGE, the question of implementing further investments in partnership or independently is open. During the debate "Offshore wind – the road to 33 GW" further statements were made about the future after Phase I.



Kacper Kostrzewa, Project Director of BC-Wind implemented by Ocean Winds, stressed the importance of investor involvement in preparing the market and supply chain in terms of not only current projects but also future development of the offshore industry in Poland. It is important to educate market participants and transfer knowledge, including in the area of research and development, as well as rapidly developing technologies such as floating wind farms being developed by OW in many markets.

Jaroslaw Trybuchowicz, President of the Management Board of Orlen Neptun and Baltic Power, assessed the progress of work in the implementation of the first wind farm, being developed in cooperation with Canada's Northland Power. After contracting all deliveries of the main tier 1 components last year, a final investment decision should be made this year. The experience from this project will allow good planning for the implementation of subsequent projects. As part of Phase II, Orlen Group companies have been given five new locations. They will be able to implement them using the installation terminal the company is building in the port of Świnoujście. President Trybuchowicz stressed the great potential of the Polish market and companies, which are already building a supply chain for the use of many foreign and domestic investments. He also stressed the need to develop human resources for the sector, including at the level of technicians needed to build and operate wind farms. Hence, Orlen is betting on cooperation with universities and high schools to train specialists in this field.

During the debate, Alicja Chilińska-Zawadzka, CEO of EDF Renewables Poland, emphasized the interest in participating in the second phase of the projects, noting that the company received the highest scores among foreign investors. The offer for the Polish offshore program based on the experience of implementing wind farms in France and building a local supply chain in cooperation with experienced partners was evaluated positively.

The future of the Polish offshore program was addressed by a representative of the administration - Natalia Zajac, head from the Ministry of Infrastructure, which was responsible for the adjudication process for 11 proceedings resulting in the granting of permits for the erection and use of artificial islands, structures and equipment for offshore wind farms (the so-called PSZW). She informed that the Ministry plans to expand the "Spatial Information System for Maritime Administration" (SIPAM) allowing investors to submit applications in a simplified manner. Natalia Zajac also pointed out the need to update the maritime spatial plan to organise the next phases of Polish offshore development.

Jaroslav Broda, Member of the Management Board of Baltic Power, also spoke about the advantages of offshore wind energy, stressing the importance of the scale of the project being implemented. Each of the 76 turbines will have a capacity of as much as 15 MW. This is much more than the 3 MW turbines popular on land. The production potential from offshore farms is also greater due to higher efficiency, which is due to higher windiness at sea than on land.

In a debate summarizing the status of Phase I projects, Ireneusz Zyska, Deputy Minister of Climate and Environment, referred to the potential of Polish wind energy in the Baltic, pointing out that in 2035 up to 40% of energy could come from this source producing electricity and hydrogen. An important role will be played by the involvement of Polish entities to create so-called local content and port infrastructure. The first installation terminal is being built in Świnoujście, and the second should be in Gdańsk, said the minister. Service ports located in Ustka, Łeba, Władysławowo, perhaps also in Kołobrzeg, will be important as well.



Future of cPPA contracts from Offshore Wind Farms: Unlocking the potential

20-22.06.2023



Photo by Waldemar on [Unsplash](#)

European market for corporate Power Purchase Agreements (cPPA) with offshore wind farms is experiencing substantial growth, with notable contracts being signed by large energy consumers in the years 2022 and 2023 like Google, Amazon, Mercedes Benz or Umicore. Recognizing this evolving market and the immense potential of cPPAs in the offshore wind sector, RE-Source Poland Hub, with support of BalticWind.EU, hosted a thought-provoking debate during the PEWA annual conference in Serock, Poland on 22 June.

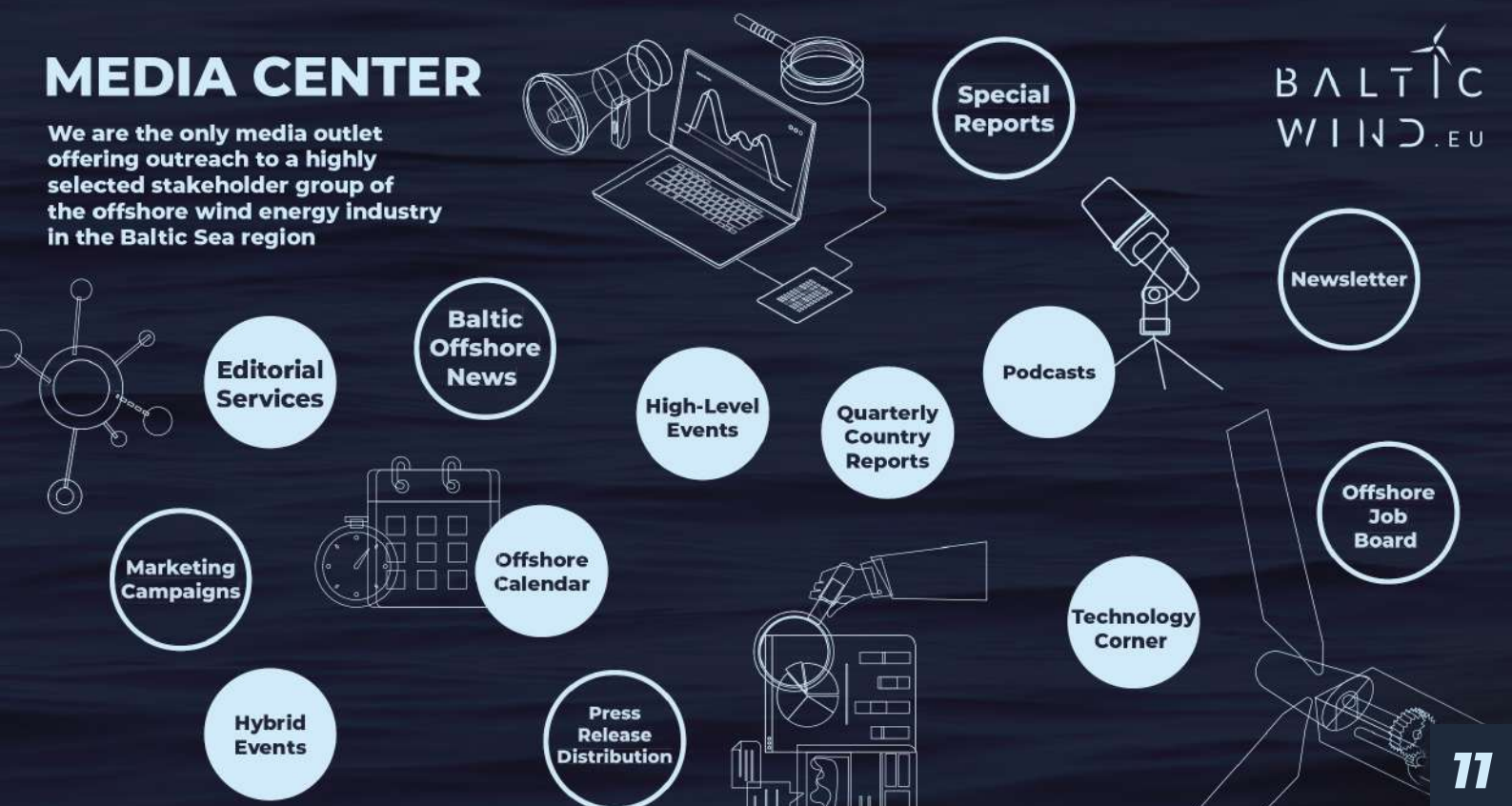
Power Purchase Agreements (PPAs) enable businesses to directly purchase green electricity from renewable energy producers through long-term contracts. According to

data from WindEurope.org, offshore wind PPAs have gained significant traction since 2018 and are becoming increasingly popular among energy-intensive industries.

The debate was followed by a presentation on the European perspective on cPPA. Pawel Wrobel, managing director at BalticWind.EU emphasized that the European PPA market, driven by anticipated growth from the EU electricity market design reform being developed by the European Commission, has seen heavy industries and the ICT sector signing the majority of offshore wind PPA contracts. This reform aims to encourage long-term contracts, particularly to stimulate the cPPA market.

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Noteworthy cPPA examples from 2022 and 2023 include major players in various industries. Air Liquide, representing the heavy industry and chemicals sector, signed a 115 MW agreement with Vattenfall to secure a portion of the generation output from the Hollandse Kust Zuid (1500 MW) offshore wind farm. Google entered into a cPPA with ENGIE for 100 MW capacity from the Morray West (882 MW) offshore wind farm. Steel producer

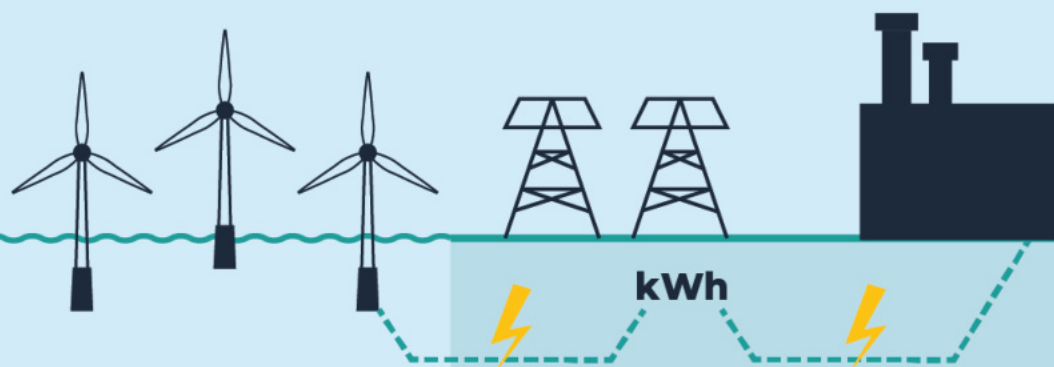
Salzgitter signed a contract with Iberdrola for 114 MW from the Baltic Eagle (476 MW) wind farm. Amazon secured 1.1 TWh per year from Baltic Eagle (476 MW) and Windanker (300 MW) through a contract with Iberdrola.

Mercedes Benz signed an agreement with Iberdrola for 140 MW from the Windanker (315 MW) offshore wind farm.

Offshore wind cPPA market in Europe is growing

Examples of cPPA contracts with offshore wind farms signed in 2022 and 2023

Year	Offtaker	Industry sector	Supplier	Contracted	Offshore wind farm
2022	Umicore	Heavy industry	Engie	28 MW	Seamade (487 MW)
2022	Air Liquide	Heavy industry	Vattenfall	115 MW	Hollandse Kust Zuid (1500 MW)
2022	Evonik	Heavy industry	EnBW	100 MW	He Dreit (900 MW)
2022	Salzgitter	Heavy industry	EnBW	50 MW	He Dreit (900 MW)
2022	Google	ICT	ENGIE	100 MW	Morray West (882 MW)
2022	Boraelis	Heavy industry	Eneco	38 MW	SeaMade (487 MW)
2022	KPN	Telecom	Eneco	50,7 MW	Hollandse Kust West (760 MW)
2023	Salzgitter	Heavy industry	Iberdrola	114 MW	Baltic Eagle (476 MW)
2023	Amazon	ICT	Iberdrola	1.1 TWh rocznie	Baltic Eagle (476 MW) + Windanker (300 MW)
2023	Holcim AG	Heavy industry	Iberdrola	250 GWh rocznie	Baltic Eagle (476 MW)
2023	Mercedes Benz	Automotive industry	Iberdrola	140 MW	Windanker (315 MW)



One of the main drivers for further growth of the cPPA market in the European Union will be the reform prepared by the European Commission. The EU electricity market reform, adopted by the EC in March 2023, has outlined several objectives to facilitate the growth of renewable energy and cPPAs including encouraging long-term contracts, with a specific focus on stimulating the cPPA market, as well as accelerating the installation of renewable energy sources (RES), including offshore wind, by expediting the implementation of multi-country small hydroelectric power (SHPP) projects and ensuring market access for offshore energy. Moreover promoting investment in RES by facilitating access to long-term contracts, such as cPPAs and Contracts for Difference (CfDs). This involves ensuring that financially sound companies facing barriers to entry into the PPA market have access to instruments that mitigate the financial risks associated with buyer default on long-term payment obligations under the PPA. These instruments could be in the form of market-based guarantee schemes or public support for cPPAs.

The debate moderated by Szymon Kowalski, deputy president of RE-Source Poland Hub, speakers - Bartosz Wilk, CEO of Business Energy Solutions, Andrzej Kaźmierski, Director of the Department of Low Carbon Economy at the Ministry of Development and Technology, Jakub Guzikowski Senior Expert from PGE Baltica and Mateusz Marczewski, Head of Institutional Clients Western & Eastern Europe w Axpo Polska discussed the topic and Paweł Wróbel - focused on the potential and perspectives of Polish offshore wind for cPPA contracts.

The debate at the PEWA annual conference in Serock provided a platform for industry experts, policymakers, and stakeholders to discuss the future of cPPAs from offshore wind farms. It explored the evolving market dynamics, the impact of EU reforms, and strategies to unlock the full potential of cPPAs in driving the transition towards a sustainable and renewable energy future.

As the market for cPPAs with offshore wind farms continues to expand, these agreements hold great promise for businesses seeking to reduce their carbon footprint, achieve renewable energy targets, and contribute to a cleaner and greener future.



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“Anna” studied wind and wave intensity for Bałtyk I project

17/04/2023



Equinor and Polenergia have completed more than a year's worth of wind and wave intensity studies for the most advanced project of the so called “second phase” – the offshore wind farm Bałtyk I. Ocean and meteorological data, collected by the device christened “Anna”, will allow to determine the expected energy production of the wind farm, as well as to create its design from the foundations to the blades.

– Wind research is an important step in the implementation of the Bałtyk I offshore wind farm, which is the most advanced project of the second phase of offshore wind development in Poland. Our goal is to prepare the project to participate in an auction planned for 2025. The continuity of wind farm projects in the Polish part of the Baltic Sea, and thus the pace of Poland's energy transition, depends on the success of this auction. Therefore, we are ready to support partners with our experience and capabilities in the implementation of offshore investments and work together to increase the competitiveness of this market – says Michał Kołodziejczyk, Country Manager of Equinor in Poland.

Wind and wave intensity surveys are an important input to the environmental impact assessment report being prepared, on the basis of which an application for an environmental decision will be prepared. It is a document required to participate in an auction for offshore wind power.

Since the research began on International Women's Day, the team decided to name the LiDAR buoy used for measurements “Anna”. Data was collected over 12 months in the area of the Bałtyk I offshore farm, 81 kilometers from the coastline.

LiDAR enables accurate measurement of wind speed, which is crucial for determining energy production at a given location. The device also measures wave height and length,

direction of sea currents and temperature. The use of this method is an alternative to traditional metocean measurements carried out with survey masts.

The wind surveys were conducted by RPS, an international company with experience in such projects around the world. All work was closely monitored by meteorological and oceanographic experts from RPS and Equinor to ensure high quality and consistent data. The subcontractors responsible for placing the equipment at sea and towing it to port after the campaign were Polish companies – MEWO and Fairplay Towage Poland.

– We are keen that as many Polish companies as possible participate in the development of the Bałtyk I offshore wind farm. We are pleased that we are once again bringing together Polish players who are well acquainted with local conditions with international partners who can share experience and know how – says Maciej Stryjecki, Head of Offshore Wind at Polenergia.

Equinor and Polenergia are jointly developing three offshore wind farm projects in the Polish part of the Baltic Sea. Their total capacity will reach 3 GW. This means that the farms will be able to produce enough energy to power more than 4 million Polish households. According to the schedule, Bałtyk I, which has a capacity of up to 1.56 GW, will come online in 2029. Two years earlier, offshore farms Baltic II and Baltic III, with a total capacity of 1.44 GW, will begin producing energy.

The Baltic projects implemented by Equinor and Polenergia are an important part of the transformation of the Polish energy sector, which includes the construction of offshore power plants with a total capacity of nearly 11 GW in the Polish part of the Baltic Sea by 2040.

Source: Equinor

DNV publishes world's first certification guidance for energy islands and offshore wind farms in Poland

20/04/2023



DNV has published an important update of its comprehensive service specification for project certification, DNV-SE-0190. The new edition is the world's first document which addresses the certification of energy islands and offshore wind farms in Poland.

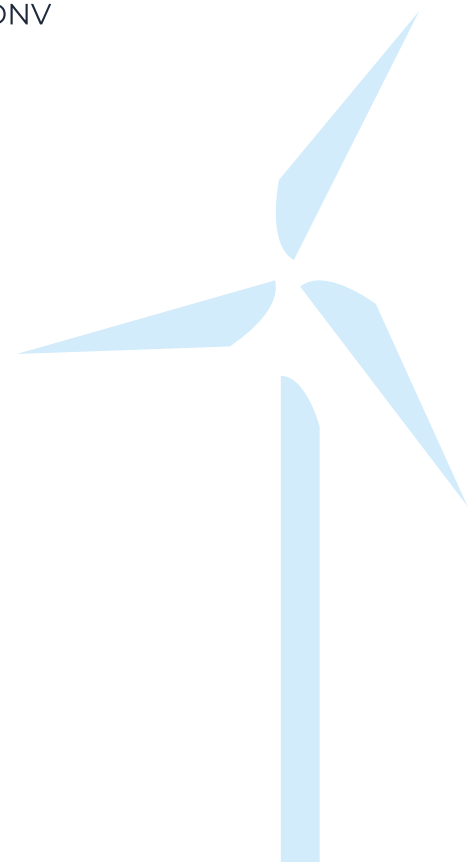
Poland is planning impressively rapid growth in offshore wind and has recently published the Polish Maritime Safety Act which defines country specific requirements for certification. The new Appendix in DNV's service specification is addressing those requirements and combines it with the common international practice to certify offshore wind power plants in Poland.

"There was a strong need from the industry to include both topics in our service specification which will support our customers to meet growth targets for offshore wind in a safe and reliable way," explains Kim Sandgaard-Mørk, Executive Vice President for Renewables Certification at DNV. "Certification to international standards is one of the most accepted risk management tools worldwide. In times of ambitious renewables targets and cost reduction, scaling and faster implementation needs, the independent evaluation is of high importance to prove the state-of-the-art level of safety, quality and reliability for offshore wind assets."

Fabio Pollicino, Director Service Area Renewables Certification at DNV adds: "Together with our Committee of Experts (CoE), which involves external industry members, we are ensuring that the DNV services are adjusted to the market needs considering latest experiences, technologies and lessons learned from offshore projects worldwide. Several stakeholders will benefit from our guideline for Energy islands and offshore wind farms in Poland, providing transparency to organisations involved and supporting a faster energy transition."

Energy islands, giant new offshore renewable energy conversion and transmission plants, are currently at the idea stage and under development. To bring confidence to all stakeholders involved in this emerging concept, DNV has described the certification process providing guidance and transparency to the market.

Source: DNV



Ørsted and PGE select Siemens Gamesa as supplier of wind turbines for one of two stages of the Baltica Offshore Wind Farm

20/04/2023



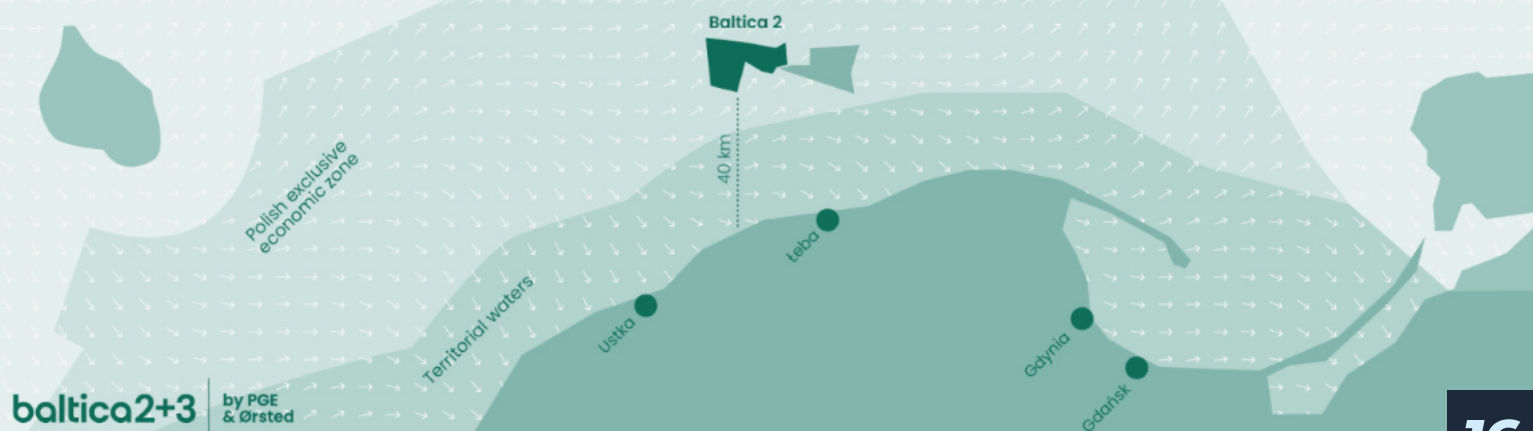
Source: PGE Baltica

Ørsted and the PGE Group have signed an agreement with Siemens Gamesa Renewable Energy for supplying offshore wind turbines for the Baltica 2 project with a total capacity of about 1.5 GW. It is Poland's largest-ever renewable energy project and will produce enough green energy to cover the power consumption of approximately 2.4 million Polish households. Ørsted and PGE expect to be able to commission Baltica 2 by the end of 2027.

In addition to supplying 107 turbines with capacity of 14 MW each, Siemens Gamesa will be also responsible for service and supply of spare parts for a period of five years.

– We are developing the biggest renewable energy project to date in Poland. The signed contract relates to delivery of turbines for Baltica 2 with capacity of about 1.5 GW, which is the biggest offshore wind investment developed in the Polish part of the Baltic Sea and one of the largest of its kind in the world. The PGE Group is responsible for ensuring Poland's energy security. We consistently implement the strategy of creating new, green sources of electricity for our country. By 2030 we aim to build about 2.5 GW of generation capacity in the Baltic Sea – commented Wojciech Dąbrowski, President of Management Board of PGE Polska Grupa Energetyczna.

Baltica 2







– In light of the macroeconomic challenges, we are particularly proud that we're able to announce this important milestone for Baltica 2 – a project that will be pioneering the offshore wind industry in Poland and will lead the way for Poland's transition to green energy. I wish to thank our partner PGE and the Polish government for their support in making this possible – said Rasmus Errboe, CEO of Region Europe at Ørsted.

– This latest deal for Baltica 2 will cement the foundations for a successful rollout of offshore wind power in Poland. The Baltic Sea can provide huge opportunities for the growth of the industry in coming years, and we stand committed with Poland and our partners to develop it further – said Marc Becker, CEO of the Offshore business in Siemens Gamesa.

Source: PGE Baltica

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Capacity reservation for Baltyk II and III

24/04/2023



Source: Sif

The joint venture Equinor-Polenergia (“JVEP”) and Sif have entered a capacity reservation agreement for the supply of 90 monopile foundations for JVEP’s Baltyk II and III offshore wind project in Poland.




Once finalized, this will be the first contract under the terms of the strategy collaboration agreement that Sif and Equinor have entered in relation to the expansion project Sif has embarked on. The monopiles will be manufactured in 2025-2026 and have an estimated production volume of approximately 105 kton.

Baltyk II and III are two offshore wind projects in the Polish Baltic Sea envisaging a total installed capacity of potentially 1.440 MW. Baltyk II and III cover a combined area of approximately 240 square kilometres located between 22 km and 37 km from the coast. The water depths range from around 25 to 40 meters.

Fred van Beers, CEO of Sif Holding: “It is great to witness this next chapter of the successful cooperation Sif and Equinor have developed over the years and that has materialized in the recently signed framework agreement. We are also happy to welcome Polenergia as a new potential customer. We very much look forward to jointly help develop this huge wind farm that can provide more than 2 million Polish households with green electricity and will be another significant contributor to the EU energy transition program.”

Source: Sif

OFFSHORE EVENTS CALENDAR

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PGE and Ørsted have appointed the Contract Engineer to exercise Investor's supervision over the land connection for the Baltica Offshore Wind Farm

28/04/2023



PGE and Ørsted – companies building the Baltica Offshore Wind Farm – have signed an agreement with a consortium made of Biuro Studiów, Projektów i Realizacji “Energoprojekt-Katowice” SA and “Energopomiar” Sp. z o.o. The consortium will be acting as a Contract Engineer when constructing the land connection of the project

– It is very important for the PGE Polska Grupa Energetyczna to make the best use of the potential of domestic suppliers and service contractors in the supply chain for the Baltica Offshore Wind Farm. We are pleased to assign the function of Contract Engineer to a consortium consisting of Polish companies, confirming that domestic companies have the right potential to enter into tenders for such large offshore wind energy investments – said Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna.

– The signing of an agreement with the consortium of the companies Biuro Studiów, Projektów i Realizacji “Energoprojekt-Katowice” SA and “Energopomiar” Sp. z o.o. brings us closer to providing 2.5 GW of green energy for Polish households by 2030. This cooperation is also in line with our commitments under the sectoral agreement for the development of offshore wind energy in Poland, the primary objective of which is to maximise the local content – said Agata Staniewska-Bolesta Managing Director Offshore Poland, Ørsted.

The consortium of Biuro Studiów, Projektów i Realizacji “Energoprojekt-Katowice” SA and “Energopomiar” will be exercising investor's supervision over the work performed by the general contractor while building the line and the station parts of the onshore connection infrastructure.

The tasks of the Contract Engineer include the constant control of the quality and progress of the work carried out by the general contractor. The agreement that has been signed provides also for their participation in inspections, factory acceptance tests and periodic health and safety checks.

The infrastructure comprising Baltica Offshore Wind Farm's onshore connection will be located in the vicinity of Osieki Lęborskie – a village in the municipality of Choczewo, in the Wejherowo powiat of the Pomorskie voivodeship.

According to the time schedule, both stages of the Baltica Offshore Wind Farm, i.e. Baltica 2, with a capacity of approx. 1.5 GW and Baltica 3, with a capacity of approx. 1 GW, will be launched by the end of this decade. Location decisions (PSzW) and environmental decisions have already been issued for both stages of the Baltica Offshore Wind Farm. Applicable contracts with the Transmission System Operator, pertaining to the connection to the network, as well as laying and maintaining the cables (PUUK) have been signed as well. The projects have received the right to Contracts for Differential (CfD) and the decisions on the individual level of support have already been issued by the European Commission and the President of the Energy Regulatory Office.

Source: PGE Baltica

Success of the first edition of "Choczewo. Municipality Powered by Wind" program to support local initiatives

10/05/2023



Photo: Baltic Power

45 projects with a total value of PLN 1 million were implemented in the first edition of the "Choczewo. Municipality Powered by Wind" program. The initiative created for the residents of the Choczewo municipality (Pomeranian voivodeship) is an idea of offshore wind farm investors implementing offshore investments in the Polish part of the Baltic Sea: Baltic Power (PKN ORLEN and Northland Power), PGE Baltica and Ørsted, as well as Ocean Winds. The goal of the initiative is to support ideas submitted by the local community of a municipality where the infrastructure necessary to bring power from offshore wind farms to land is being developed.

Residents are decisive

"Choczewo. Municipality Powered by Wind" has always been a program aimed at residents, planned to activate the local community and strengthen its social capital

by subsidizing initiatives submitted and indicated as important by the residents themselves. It is a joint venture between investors who are making investments in offshore wind farms. The program is implemented by working directly with the community, from diagnosing the needs, describing them and looking for the best ways to implement them. Residents themselves identified initiatives that they thought should receive financial support and move from the concept stage to the implementation stage.

"Choczewo. Municipality Powered by Wind" is a valuable initiative. The program, through the involvement of various social groups and residents from different villages and hamlets, contributes to the activation of the municipal community. At the same time, it increases everyone's awareness of wind energy – stresses Wiesław Gębka, Head of the Choczewo Municipality.



From idea to design

During the first stage of the Program's development, the implementation team held nearly 100 meetings with residents of the municipality. These included one-on-one interviews, workshops and research walks, the main purpose of which was to diagnose the most important needs of the community, but also to inspire concern for the immediate environment. The result of the activities carried out with residents included selecting thematic areas under which investors of offshore wind farms supported specific projects.

– This is an initiative that responds to the real needs of residents. Projects funded under the Program meet the expectations of the local community, reported directly by our neighbors. A huge advantage of this initiative is the process of wide consultation – Krzysztof Łasiński, Chairman of the Choczewo Municipal Council

Many valuable initiatives

One of the projects that received funding was an initiative called From Grandma's Plate. It planned the publication of a cookbook, containing recipes brought to Choczew with the settlements after the end of World War II. Residents who came to the area of today's Choczewo municipality often brought with them very different cultural traditions. Therefore, the initiators of the project wanted to save the memory of culinary customs that shaped the identity of families in previous generations.

The program also allowed for the implementation of initiatives involving the promotion of sports and active lifestyles. The Choczewo municipality hosted a series of volleyball tournaments open to all residents: on the occasion of Independence Day, the Santa Claus Tournament, the New Year Tournament and the Valentine's Day Tournament.

We proposed three initiatives: "We Live Green", "We Are Fair-play" and "Green Wind". Thanks to funding from the Program, we carried out projects aimed at raising environmental awareness of our school's students, promoting physical activity and inspiring them to take greater care of the environment. We organized a series of workshops for students, including a trip to Warsaw's Copernicus Science Center, where our students were able to learn more about the principles of sustainable development in practice – stresses Róża Majchrzak, director of the School and Kindergarten Complex in Ciekocin.

Among the projects was an initiative that focuses on the development of the municipality's residents from the youngest to seniors, thereby promoting intergenerational integration. The Carpe Diem Semper Cultural and Social Association has implemented a project called Multigenerational Mobile University. The initiative included a series of educational and integration events. Among other things, Culinary Street Picnic or the Baltic Sea Nordic Walking March took place.

Funding for 45 projects

Support under the program has been received by, among others, 11 the villages of the Choczewo Municipality, associations acting for the benefit of the residents of the municipality or individual organizational units of the community

Preparations are currently underway to launch the second edition of "Choczewo. Municipality Powered by Wind". It is preceded by a detailed evaluation of the Program's implementation in 2022. Investors assure that, as was the case with the first edition of the Program, the opinion of residents will be most important in the final selection of projects for implementation.

Baltic Power is a project that from the beginning of its implementation has placed special emphasis on a policy of sustainable development. Along with environmental protection and corporate governance, social responsibility defines our company's and its shareholders' approach to making modern energy investments. The Baltic Power farm will eventually power more than 1.5 million households in Poland, with Choczewo being the place from where the power will go to the grid. We regard the understanding and support of residents as part of responsible, good-neighborly relations – stresses Jaroslaw Broda, Board Member of Baltic Power.

The program Municipality Powered by Wind is directly related to important offshore wind farm investments for the Polish energy sector. It is intended to draw the attention of local communities to the role of investments made in the Choczewo municipality in the process of effective energy transition of our country. It allows information about offshore wind farm projects to reach out to local leaders and informal groups, such as farmers' clubs, volunteer fire departments and local rural communities.

More information about the project is available at:

www.gmina-napedzana-wiatrem.pl

Source: Baltic Power

PGE Baltica engages Polish companies to build service base in Ustka

16/05/2023



Photo: PGE Baltica

Starting the construction of an operations and maintenance base to serve offshore wind farms is an undertaking preceded by a months-long preparatory process. Already at this stage it is necessary to hire contractors for the work necessary to carry out the investment. In the case of preparation for the construction of PGE Baltica operations and maintenance base in Ustka, the company has engaged Polish entities, which shows that domestic companies can successfully join the development of offshore wind energy in Poland.

The PGE Baltica base will be built in the western part of the Port of Ustka on an area covering a part of a former fish processing plant. The service center is to serve the ongoing monitoring of PGE's wind farms in the Baltic, as well as planned and ad hoc repairs of offshore wind turbine components. Units with service crews and spare parts will depart from here. PGE Baltica also wants to build an Offshore Wind Energy Competence Center on the site, where, among other things, future service technicians will be trained.

The key to good investment preparation

Before selecting and purchasing a suitable property with access to the wharf, the investor checks whether the location is best for the realization of a service base. However, before construction work begins, it is necessary to plan all the necessary analyses and studies of the land intended for the future service base, make an inventory of the site, carefully assess the possibilities of the selected location in terms of the tasks to be fulfilled, so as to make optimal use of the available real estate area. Along the way, the investor announces purchasing procedures and selects the companies that will carry out the project for him – from preparatory and analytical work, through a contractor for the conceptual design and site development project, to a contractor for a construction project, contract engineer and general contractor, who, after obtaining a building permit, will begin the actual construction work.

project, contract engineer and general contractor, who, after obtaining a building permit, will begin the actual construction work.

Research for efficient navigation and operational capabilities

The preparation of a service port construction project must be preceded by thorough studies conducted throughout the port area. Among other things, it is necessary to analyze the maritime access infrastructure, which will accurately determine the parameters prevailing on the approach to the port and inside the port channel, which directly affects the navigational capabilities of the port in question. At the port wharves, there will be a permanent vigilance of several vessels, which sometimes have to sail to the wind farm area in case of emergencies. It is in terms of efficient navigation and operational capabilities that the port must be properly prepared. This research work is being carried out for PGE Baltica by the Institute of Hydro-Engineering of the Polish Academy of Sciences in Gdansk.

– Among other things that scientists are studying for us are wave action, changes in water levels inside the port, sea currents and associated sediment transport. They check how local natural conditions will affect the designed hydrotechnical facilities. They determine the parameters necessary to plan maintenance and investment works that improve the conditions in a given port and make it possible to increase the availability of given infrastructure – says Tomasz Wiśniewski, senior project manager for port investments at PGE Baltica. – Among other things, the possibility of building wave absorbers or breakwaters is being investigated. These could reduce wave action inside the entire port channel and that, in turn, could allow for an increase in the potential related to the number of berths for service vessels in the port and safe navigation inside the port channel during adverse weather conditions at sea. The effect of these tasks will influence the final scope and shape of the operations and service base project – adds Tomasz Wiśniewski.

Specialists will be trained in the building of the old fishing net factory

A comprehensive inventory of the site's existing condition, consisting of more than a dozen volumes of documentation, was prepared for PGE Baltica by Antea Polska S.A., a company that specializes in engineering and environmental consulting. The facilities to be inventoried included buildings and typical port elements, including wharves, former production halls, and buildings of the so-called old and new fishing net factories. The result of the inventory will be documentation that will allow for necessary maintenance activities and implementation of preparatory work.

– The contractor has carried out soil surveys, which have shown no contamination of the site. He has also gathered the documentation necessary to apply for a permit to begin work on the objects that need to be demolished. At the same time, it should be noted that the demolition will not include the building of the old grid plant. In this large, very characteristic, historic building we plan to eventually create a center of competence where new solutions for offshore wind energy will be tested. Specialists for the operation of offshore wind farms will also be trained there – says Maciej Bałchanowski, construction expert at PGE Baltica.

Best concept selected

Another entity performing services for PGE Baltica is the Wuprohyd design office from Gdynia, which specializes in designing port infrastructure and hydrotechnical structures. The contractor will carry out a design of a complex of office and welfare facilities and a spare parts warehouse, together with land development and complete above- and underground infrastructure (including electrical, telecommunications and sanitary installations), which are all elements of the future operations and maintenance base. The project team will also conduct, among other things, studies on land, in water and in laboratories, which are expected to allow the adaptation and reconstruction of wharves for the base. The result of the multi-variant analyses will be a set of design documentation that will enable the initiation of a tender procedure for the selection of a general construction contractor.

Out of three variants of the land development concept, taking into account the division of the property into various functions, the company has chosen the one that allows the port area to be best adapted to the needs of servicing offshore wind farms, while at the

same time fitting in with the port's current development and its touristic character. Construction work is scheduled to begin in 2024.

The port will get a new look



– The design work is being carried out in stages. We have made a detailed analysis of the possibilities of developing our property. We have determined the areas intended for particular functions along with their key parameters. On this basis, several variants for the use of available space were created. After conducting a multi-criteria analysis, we selected what we consider to be the optimal plan for the development of the land and the layout of the cubature facilities – explains Ernest Lewandowski, port investment expert at PGE Baltica. – We are currently at the stage of developing documentation that will form the basis for the construction project. In addition, the contractor is preparing for us, among other things, a description of the technical parameters of the equipment necessary to fully utilize the potential of the operations and maintenance base – he enumerates.

The port area in the western part of Ustka will change diametrically over the next few years. The investment in the service and operations base will revitalize the port area, which has not been used for the past several decades. A modern infrastructure necessary for the efficient operation of the service center will be built on the site of the former fishing company. PGE Baltica has hired Polish companies that proved to be the best in tendering procedures to prepare its construction. Subsequent tenders will select, among others, a general contractor. This will be another opportunity for companies from the region to participate in the construction of one of the offshore wind farm projects.

Author: PGE Baltica

Ocean Winds with a contract for the design of offshore export cables for the BC-Wind offshore wind farm

18/05/2023



Ocean Winds (OW), an international company dedicated to offshore wind energy and created as a 50-50 joint venture by EDP Renewables and ENGIE, has signed a contract with Australian company Sea Global Pty Ltd. and with PGNIG GAZOPROJEKT S.A. as its Polish subcontractor. The agreement concerns the execution of design documentation along with obtaining a construction permit for the offshore export cables of the BC-Wind offshore wind farm.

The scope of the contract covers the 2x 220 kV export cable section from the offshore substation to the point of connection with the onshore section of the cables, which also includes sea-to-shore guided drilling. The scope of work agreed upon in the contract includes optimization and design of the marine cable route, design of shore crossings, cable protection, electrical and thermal analyses, and tender support.

"This is the next important stage of work related to the implementation of BC-Wind project. After obtaining location permits,

signing a grid connection agreement, receiving the right to a differential contract and environmental decision, and selecting Władysławowo as an offshore service base, Ocean Winds is now focusing on working with direct and indirect subcontractors for key elements of the project. The signed agreement brings us closer to obtaining a construction permit for the farm and expands the participation of Polish companies in the supply chain for BC-Wind."
– said Kacper Kostrzewa, BC-Wind's project director.

The BC-Wind offshore farm planned about 23 km north of the municipalities of Choczewo and Krokowa in Pomorskie Voivodeship, has the potential to generate up to 399 MW from up to 31 turbines located about 23 km from the port of Władysławowo.

BC-Wind is being implemented according to schedule. The company plans to start commercial operations of BC-Wind in 2027.

Source: BC-Wind

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Installation terminal in Świnoujście takes big steps forward

19/05/2023



Szczecin and Świnoujście Seaports Authority SA and ORLEN Neptun presented information on progressing work on the construction of the first installation terminal for offshore wind farms on the Polish coast. The event also discussed the role of seaports in the development of offshore wind energy.

– Offshore wind energy has the potential to become the flywheel of Polish economy. The expansion of the port in Świnoujście with a new terminal is a great opportunity for the development of the entire region. Studies show that one job at the port generates as many as eight jobs in the port-related industry – said Marek Gróbarczyk, Deputy Minister of Infrastructure.

In late 2024 and early 2025 Poland's first and one of Europe's most modern installation terminals for offshore wind farms will begin operations in the port of Świnoujście. A lease contract for the port land was signed in fall of 2022. According to the schedule, the terminal's construction will start later in 2023. The terminal will reach operational capacity in late 2024/early 2025. Demolition work is currently underway to prepare the site for the start of construction.





The construction of the terminal consists of two separate investments – the hydrotechnical part, which is the responsibility of Szczecin and Swinoujscie Sea Ports Authority (ZMPSiŚ), and the land part, which is being carried out by ORLEN Neptun. As part of the tasks carried out by ZMPSiŚ, two new wharves are being built that extend 25 meters further out into the water compared to the existing wharves. The fairway will be deepened from the Mielno turntable to the new terminal, and the dredged material will be used for backfilling between the new and existing wharves. The onshore part of the project, for which ORLEN Neptune is responsible, will include new storage areas for offshore wind turbine components, such as towers, blades and nacelles, with a total area of about 17 hectares, communication infrastructure, as well as a new administration and office building.

The installation terminal in Świnoujście will be one of the most modern terminals in Europe. The two wharves will allow the initial installation of wind turbine towers more than 100 meters high and weighing about 1,000 tons each. The length of the wharves, both 250 meters, will allow the largest specialized jack-up vessels currently available to operate, designed to install state-of-the-art turbines of 15MW and above. The terminal, as envisioned, will first serve to install components of the Baltic Power farm, followed by further investments in the Baltic. The port in Świnoujście, due to its location, will be able to offer service not only to Polish investments, but also to foreign ones (e.g. those carried out in German, Swedish and Danish waters).

Source: Ministry of Infrastructure



The construction of transmission infrastructure for Baltic Power offshore wind farm is commenced

23/05/2023



Photo: Baltic Power

The ORLEN Group and Northland Power have commenced the construction of an onshore substation in the Choczewo municipality. The project will allow the Baltic Power wind farm to receive energy generated offshore. According to the schedule, the farm will start producing zero-carbon energy in 2026.

“As the first company in Poland, we commence constructing infrastructure allowing to deliver electricity produced offshore to the grid. We have also started work in the area of the installation terminal for offshore wind farms in Świnoujście. We are not slowing down, since making investments in modern, zero-carbon energy is a pillar of our strategy. Offshore wind farms, in addition to small nuclear reactors, will be key to transforming Poland’s electricity system and strengthening our region’s energy security. We are fully prepared to implement the project in the Baltic Sea that will provide clean, affordable energy to millions of Poles as early as 2026,” Daniel Obajtek, President of the Management Board of PKN ORLEN.

The whole accompanying infrastructure for the Baltic Power farm was designed so as to minimize the project’s environmental impact. The substation, being an onshore part of the Baltic Power wind farm, will act as a hub for cable lines transmitting electricity from offshore substations located nearly 30 kilometres away. Almost the whole route of the cable’s onshore section of approx. 7 kilometres will be routed underground. This also applies to the beach – thanks to the use of so-called directional drilling, the landfall will be routed at a depth of approx. 10 meters underground. Thanks to this, it will be invisible and will not affect the possibility to use the beach. The route of the onshore cable route has been designed so as to make the project minimally interfere with the natural environment and bypass naturally valuable areas.

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“Baltic Power is an example of a project placing a special emphasis on the aspects of environmental protection, sustainable development and respect for local communities, i.e. the aspects that are so important to both Northland Power and our partner. We are all the more glad that the Baltic Power project is reaching another, such important milestone. Our farm, the construction of which will be commenced in 2024, will secure the first supplies of green energy for Poland in just a few years, as planned,” concludes Mike Crawley, President of the Management Board of Northland Power.

A consortium of GE and Enprom is responsible for the design, construction and delivery of the necessary components for the onshore substation. GE also designed the electrical system and provided high voltage power components. Enprom, a Polish company, prepared the design and is fully responsible for the construction of the substation.

Currently, Baltic Power is the most advanced offshore wind farm construction project in Poland. The company ended 2022 by fully securing the contracts for all key components

necessary for the construction of the wind farm as part of the planned supply chain. In 2023, along with securing all environmental decisions and building permits, Baltic Power commences its first onshore construction works. According to the schedule, the first offshore installation works will be commenced in 2024. At the same time, in 2022 ORLEN Group made a strategic decision to build Poland’s first installation terminal for offshore wind farms. The project is being implemented in the port of Świnoujście and after being completed at the turn of 2024/2025 will be one of the most modern terminals in Europe. Its quaysides and storage yards will allow to transport and install state-of-the-art wind turbines of 15 MW and above. The Baltic Power’s offshore wind farm will consist of 76 turbines with a unit capacity of 15 MW and a height of more than 200 meters operating in an area of approx. 130 sqm. The farm will be located approx. 23 kilometers away from the coast, at the height of Choczewo and Łeba, where the farm’s service port will be built. Once completed, the farm will be able to deliver clean energy to more than 1.5 million households.

Source: Baltic Power

BGK: Polish companies are ready for offshore wind farm development

30/05/2023



Bank Gospodarstwa Krajowego, a Polish development bank, conducted a survey of companies that, due to their scale and area of operations, may be interested in building wind farms in the Baltic Sea. 9% of the surveyed have already committed to the initiative. What is the future outlook for the sector in Poland?

Poland on the wave of offshore wind energy

It is estimated that the share of offshore wind power in Poland's total energy production could be as high as 57% in 2040. This shows how much opportunity there is for Polish entrepreneurs who choose to participate in this initiative.

"The development of Polish industry is in line with the goals of one of the programs of our business model. Current EU regulations related to sustainable development oblige us to provide and implement solutions for projects that support the development of the economy. In this case, we want to support Polish entrepreneurs who will undertake to participate in the construction of offshore wind farms" – says Marcin Terebelski, director of the Industrial Development program at BGK.

Polish companies at the forefront of change

The BGK survey shows that Polish companies are ready to engage in the construction of wind farms. About 47% of the entrepreneurs already involved believe that the current scale and scope of their business is sufficient to engage in this initiative.

Adam Piłat, a team manager for Strategic and Program Analysis at BGK, notes that "the implementation of such a complex investment may involve the need to increase employment – building new business relationships with other entities and expanding production capacity."

Support for offshore wind energy

Polish companies are ready to support the construction of wind farms in the Baltic Sea. Nearly half of the surveyed entrepreneurs say they could participate in the production of turbines or their components, and more than 60% report a willingness to supply other parts of power plants.

The planned value of this investment project in the Baltic is around PLN 130 billion. The survey shows that the percentage of orders going to Polish entrepreneurs could reach 27% in the case of services related to the installation of offshore wind farms, and up to 74% when it comes to the production of power plant parts other than turbines.

The future of offshore wind power

The European Commission has adopted offshore wind technology as one of the pillars of its energy strategy and one of the strategic goals of the European Green Deal. According to EU forecasts, offshore wind power capacity in Europe could reach 60 GW by 2030, and 300 GW by 2050.

Poland, with its offshore wind energy potential, has the opportunity to become an important player in this growing market. The interest of Polish entrepreneurs in the initiative to build offshore wind farms is proof that they are ready to take on this challenge and contribute to the country's energy transition.

Some of the biggest beneficiaries of offshore wind farm construction in Poland include shipbuilding, steel and metal industries. The Polish Offshore Wind Energy Society lists more than 300 Polish companies that can participate in the supply chain of farms in the Baltic Sea.

The entire report is available [here](#).

Source: www.bgk.pl

Six more locations awarded for Phase II of Polish offshore

31/05/2023

On 30 May 2023, the Ministry of Infrastructure published the results of six adjudication proceedings for new areas where offshore wind farms will be developed under the so-called Phase II of the Polish offshore. Among the successful applicants are Orlen Group's companies: Energa MFW 1, Energa MFW 2, Orlen Neptun III, Orlen Neptun IV, Orlen Neptun VIII, as well as PGE's Baltica 2 Offshore Wind Farm.

The following is a list of areas indicating the applicants who have reached the minimum qualification in order of points scored. Entities in the first places are those selected in the adjudication proceedings.

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1. Energa MFW 1
2. Baltica 4 Offshore Wind Farm
3. EDF Renewable Offshore Polska I
4. Amber Baltic Wind 4
5. Cercola
6. POW-Polish Offshore Wind-Co
7. MEP North
8. Orsted Polska OF SPV 2

Area 14.E.2

1. Energa MFW 2
2. Baltica 6 Offshore Wind Farm
3. EDF Renewable Offshore Polska I
4. Amber Baltic Wind 7
5. Camaiore
6. POW-Polish Offshore Wind-Co
7. MEP East

Area 14.E.3

1. Orlen Neptun III
2. EDF Renewable Offshore Polska I
3. Amber Baltic Wind 8
4. Cecina
5. POW-Polish Offshore Wind-Co
6. MEP East 44

Area 14.E.4

1. Orlen Neptun IV
2. EDF Renewable Offshore Poland I
3. Antares Offshore Wind Farm
4. POW-Polish Offshore Wind-Co
5. Cristallum 13
6. Orsted Polska OF SPV 7

Area 46.E.1

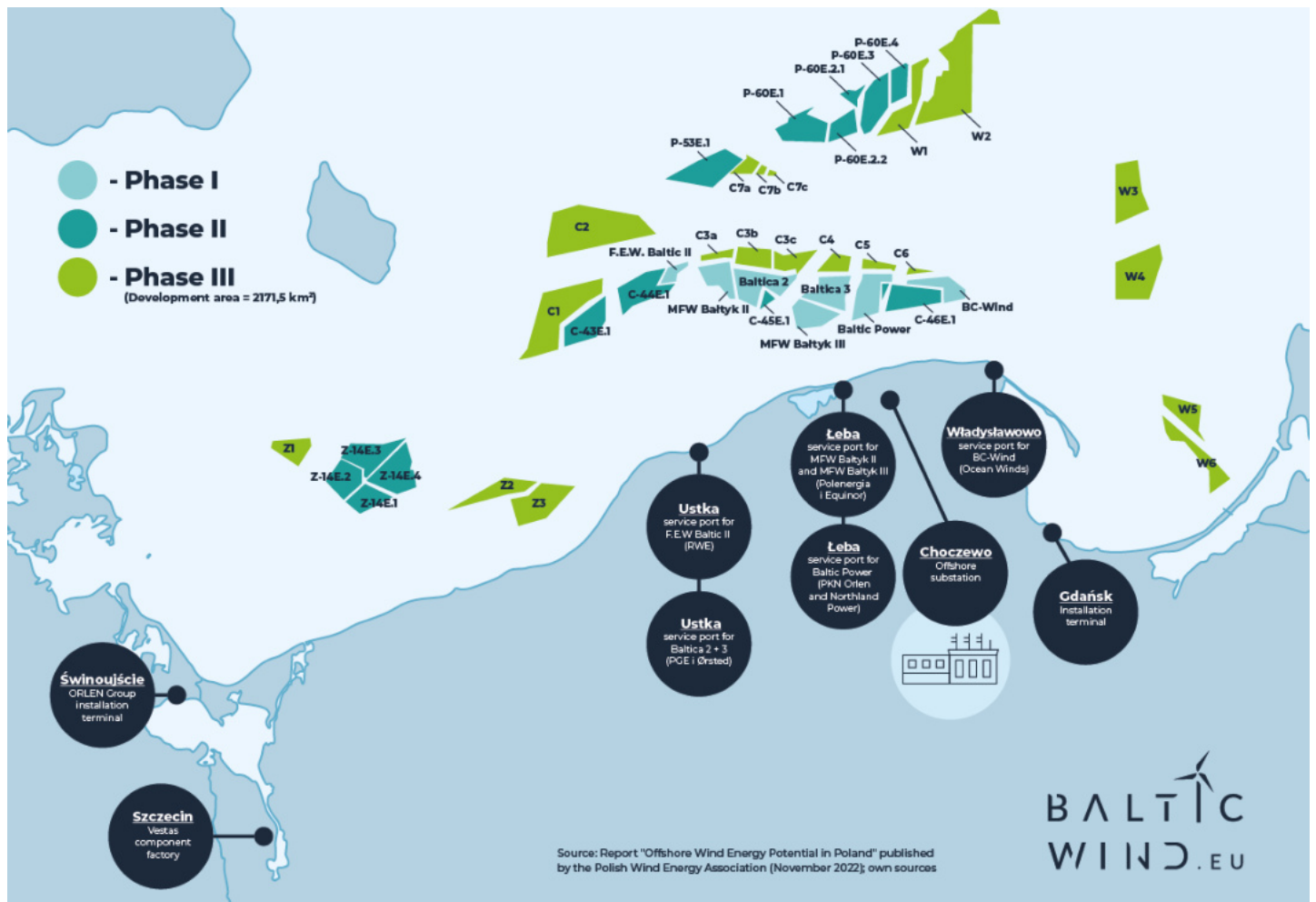
1. Orlen Neptun VIII
2. Baltica 8 Offshore Wind Farm
3. EDF Renewable Offshore Polska I
4. Amber Baltic Wind 10
5. Casarano
6. POW-Polish Offshore Wind-Co
7. Cristallum 35

Area 45.E.1

1. Baltica 2 Offshore Wind Farm
2. Orlen Neptun VII
3. Amber Baltic Wind 11

Earlier this year, the Ministry made a decision on five sites, four of which were awarded to PGE companies, and with no decision made on one site.

Source: Ministry of Infrastructure



PGE and Orlen Group to shape Phase II of Polish offshore

02/06/2023



Photo by [Nicholas Doherty](#) on [Unsplash](#)

The Ministry of Infrastructure has already published the results of all adjudication proceedings for the new areas planned for the so-called Phase II of the Polish offshore. Six locations were awarded in the past week, earlier this year the Ministry decided on five locations. In the case of one location, the process was not resolved due to the proximity of a NATO naval training ground.

Below, read comments of the representatives of Orlen Group and PGE – which received five locations each.

Daniel Obajtek, CEO of PKN ORLEN – “ORLEN Group is the best prepared company in Poland to implement large-scale investments in the offshore wind industry. This is the result of experience we have already gained in, among other things, the Baltic Power project and the construction of Poland’s first offshore wind farm installation terminal. We will use our competence in the construction of more farms, including on five new concessions we have just secured. The implementation of these investments may increase the ORLEN Group’s potential in offshore wind power to about 5.8 GW. The planned investments in the Baltic are key to the implementation of the multienergy company’s business strategy, but also to the energy security of the region.”

Wojciech Dąbrowski, President of the Management Board of PGE Polska Grupa Energetyczna – “PGE is the leader of offshore wind energy in Poland, achieving more than 7.3 GW of offshore capacity and exceeding the strategic goal of 6.5 GW of capacity built in the Baltic set for 2040. We are consistently working on comprehensive development of current and new offshore wind projects. The acquisition of another new area will allow us to accomplish this task. The new areas will be reflected in PGE Group’s strategy update. Poland needs new generation capacity of its own so that in the coming years it will be possible to limit the increase in the cost of electricity and, consequently, lower electricity bills for consumers. That is why we are investing in renewable energy sources, including wind farms in the Baltic Sea.

Energy from offshore wind farms will be cheaper, as its generation does not involve paying for CO2 emissions. In this respect, the decisions on location permits for new offshore wind farms are extremely important to us, as they will allow us to achieve the PGE Group’s strategic goals and strengthen Poland’s energy security.”

PGE reports – the group scored the most points in the proceedings for area 45.E.1, which it applied for jointly with Ørsted. The location is directly adjacent to the area where PGE and Ørsted are building the Baltica 2 project. PGE will be able to build an additional 210 MW on the new area with its partner. The area has about 17 sq. km and is located approx. 32 km from the coast. Including the earlier PSzW settlement – although not yet final – PGE will be able to build an additional about 3.9 GW on the acquired areas, reaching a total of more than 7.3 GW of power and exceeding the strategic goal of 6.5 GW of power built in the Baltic set for 2040.

The ORLEN Group, on the other hand, stressed that their investments in offshore wind energy are one of the main directions of modern energy development. The company’s strategy is to obtain about 9 GW of installed RES capacity by 2030. Offshore wind projects are to account for a part of this. With the results announced by the Ministry of Infrastructure, the generation potential of the ORLEN Group’s concessions will increase by about 5.2 GW. ORLEN Group’s experience in the offshore wind power sector is primarily in the Baltic Power project implemented together with its Canadian partner Northland Power. This is currently the most advanced offshore wind farm project in Poland. The company has secured contracts for the supply of all key components necessary for the farm. In May 2023, Baltic Power began construction of an onshore infrastructure in the Choczewo Municipality to deliver electricity produced at sea to the national grid – the first investment of its kind in Poland. Work at sea will begin in 2024, and in 2026 Baltic Power’s farm will produce energy to power more than 1.5 million households.

NKT is finalizing the power cable contract for the first major offshore wind farm in Poland

07/06/2023



Photo: NKT

NKT will soon sign the order for a 230 kV AC high-voltage export power cable system for the Polish project Baltic Power Offshore Wind Park with a capacity of up to 1.2 GW.

NKT is finalizing the contract for offshore export power cables for the first major offshore wind farms in Poland awarded by Baltic Power Sp. z.o.o. For NKT, the order is expected to have a value of more than EUR 120m (more than EUR 110m in std. metal prices) and will comprise the design and production of approx. 130 km of 230 kV high-voltage power cables for the Baltic Power Offshore Wind Park.

The export power cables will be produced at the NKT factory in Cologne, with expected commissioning of the full project in 2026. The order award will not change the 2023 financial outlook for NKT.

The order is subject to formal contract signature expected end of June 2023 and a subsequent final notice to proceed.

The Baltic Power's offshore wind farm will consist of 76 turbines with a unit capacity of 15 MW and a height of more than 200 meters operating in an area of approx. 130 sqm. The farm will be located approx. 23 kilometers away from the coast, at the height of Choczewo and Łeba, where the farm's service port will be built. Once completed, the farm will be able to deliver clean energy to more than 1.5 million households.

Source: NKT

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RWE: we continue to develop on the Polish RES market

14/06/2023

RWE said in a press release that it is exploring new opportunities, including being open to strategic partnerships in the offshore wind sector. RWE stresses that Poland is and will remain one of their strategic development markets for in the offshore wind energy sector, as well as photovoltaics and onshore wind energy.

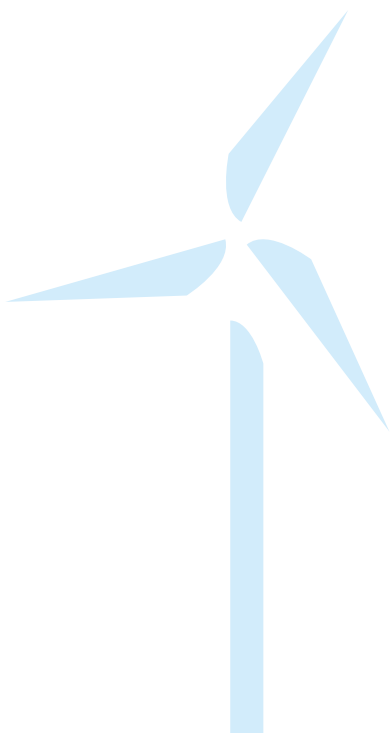
In the area of offshore wind power, the company is involved in the 350 MW F.E.W. Baltic II project. Work on RWE's first wind farm off the Polish coast is underway, with commissioning expected by the end of this decade. Among the important, already achieved milestones is obtaining the right to cover the negative balance, which is subject to approval by the European Commission. In addition, a seabed survey was successfully completed, where both geophysical surveys and preliminary geotechnical investigations were carried out by Polish contractors. The project has also received an environmental decision for the offshore wind farm area and is at an advanced stage in the process of obtaining the remaining necessary administrative decisions and permits.



As Grzegorz Chodkowski, Vice President of Offshore Development Poland at RWE, pointed out: "We are ready to be a driving force in Poland's energy transition and use our expertise to contribute to the further development of offshore wind energy in the Polish part of the Baltic Sea. Our more than 15 years of experience in the Polish renewable energy market makes it a familiar market for RWE, which allows us to use our expertise as the second-largest player in global offshore wind energy in the implementation of projects." "We accept with understanding the results of the second stage of the proceedings for granting location permits for offshore wind farms. We want to look to the future now. We are analyzing opportunities to achieve project synergies and thus increase our participation in the further development of the offshore sector. Therefore, we are open and ready to establish cooperation and enter into partnerships in Poland", adds Chodkowski.

RWE points to new F.E.W. Baltic II schedule. It was revised due to macroeconomic factors. This has pushed back the commissioning date of the offshore wind farm to the end of this decade. The new schedule is expected to allow for the implementation of the latest technologies within the investment. According to the company – thanks to RWE's close cooperation with international suppliers and Polish partners in the supply chain, the company will be able to implement the latest offshore wind energy technologies in the investment.

Source: RWE



PGE Baltica set for major milestones in Offshore Wind Development with Baltica 2 project

15/06/2023



PGE Baltica is about to see a significant advancement in the offshore wind development. Plans are underway to finalize the investment decision for the Baltica 2 offshore wind farm, which is set to generate an impressive 1.5 GW of clean energy. CEO Arkadiusz Sekściński shared the company's ambitious timeline, aiming to make the final decision within the year.

PAP informed that Sekściński expressed confidence in the project's progress, stating, "No later than a year from now, we plan to make a final investment decision for the Baltica 2 project." The company has already taken significant steps, such as signing contracts for turbine supply and offshore transformer stations. Furthermore, the announcement of contracts for offshore cables, foundations, and vessels in the offshore segment of Baltica 2 is expected imminently. With these milestones, the project's capital expenditures will exceed 50 percent, showcasing the substantial commitment to its successful realization.

To secure the necessary financing, PGE Baltica is exploring the "project finance" formula, aiming to arrange 50 percent of the financing before making the final decision. The company has already noted interest from potential financing partners for this groundbreaking project. In addition, PGE Baltica remains open to collaboration with strategic partners in the offshore sector. While the company is prepared to develop projects independently, they recognize the advantages and benefits of working with a partner, viewing it as a strategic decision at the ownership level.

The recent selection of a consortium comprised of SEMCO Maritime and PTSC Mechanical & Construction to design, manufacture, and commission offshore substations for the Baltica 2 project demonstrates the company's commitment to engaging industry experts and ensuring the highest standards of quality and efficiency.

PGE Baltica's momentum in the offshore wind sector has been further bolstered by its success in the permit proceedings for offshore wind farms sites under II phase of Polish offshore wind development. Polish Radio informed that PGE Baltica is relying on the Ministry of Infrastructure to announce the final decision regarding the location of offshore wind farms in the Baltic Sea later this month. In the first stage of granting location decisions, PGE Baltica initially obtained four decisions, and in the second stage it obtained one more, together with Ørsted. The CEO of PGE Baltica Arkadiusz Sekściński made it clear that the company has no plans to challenge the results of the second round of offshore wind location decision-making.

– 'We have reached a total of 7.3 GW, which is higher than PGE's current strategy (6.5 GW), so we are satisfied and will focus on implementing these projects,' he added.

Source: PGE Baltica, PAP, Polish Radio

EVENT

Next edition of Baltic Windustry coming in September 2023

16/06/2023



The conference “Baltic WINDUSTRY 2023: industrial research in offshore wind energy” organized by the Offshore Wind Energy Center of the Gdansk University of Technology in cooperation with the Polish Wind Energy Association will be held on 12.09.2023 in Main Building’s auditorium at Gdansk University of Technology. The purpose of this year’s edition is to present and disseminate currently developing trends and new technologies in the offshore industry and to strengthen cooperation between the business and scientific communities. BalticWind.EU is a media patron of the event.

The one-day conference is aimed at investors, researchers and industry representatives engaged in engineering and innovation activities in the offshore wind energy sector.

Baltic Windustry 2023 deals with issues related to research and application of new technologies and digitalization, which are an area of Pomeranian Smart Specializations and the development of Industry 4.0. The conference is divided into three thematic blocks: policy and financing, industry and education, research and digitization – says Małgorzata Lipska, Operations Specialist from the Offshore Wind Energy Center of the Gdansk University of Technology.

In this year’s edition, speakers will present key information on current and upcoming financing instruments for research-industrial work, economic benefits and opportunities to gain a competitive advantage after implementing offshore research results.

The INDUSTRY & EDUCATION session focuses on ways to address the shortage of skilled workers, adapting education profiles to the real needs of industry.

The RESEARCH & DIGITALISATION session demonstrates the benefits of digital technologies at various stages of a wind turbine’s life. Representatives of Polish and foreign manufacturers of turbines and their components, and wind farm operators will share their experiences – says Marcin Łuczak, Director of the Offshore Wind Energy Center of the Gdansk University of Technology.

The aim of the conference is to show that R&D cooperation with representatives of Polish and foreign industry is an added value for both sides and will allow the creation of innovative solutions dedicated to obtaining renewable energy sources.

Source and more information: <https://balticwindustry.pg.edu.pl/>

A conference poster for Baltic Windustry 2023. The background features a large white wind turbine against a blue sky with digital data overlays. The text is in white and yellow. At the top left, it says 'CONFERENCE BALTIC WINDUSTRY'. To the right, a yellow box says 'SAVE THE DATE 12.09.2023'. Below that, it says '3 sessions:' followed by a list: '> Policy & Financing', '> Industry & Education', and '> Research & Digitalisation'. At the bottom left are the logos for Gdansk University of Technology, Offshore Wind Energy Center, and PWEA. At the bottom right is the website 'balticwindustry.pg.edu.pl'.

RelyOn Nutec enters Polish market

21/06/2023



Photo: RelyOn Nutec

RelyOn Nutec, a global leader in safety training, invests in Poland and acquires GoRopes, a respected Tri-City training center specializing in Global Wind Organization (GWO)-compliant wind power courses, rope access training, and PPE sales, rentals and inspections. The investment in Poland is RelyOn's first project in the Baltic region and another step in the development of the company's offer for the rapidly growing offshore wind sector.

Combining RelyOn Nutec's extensive competence and international experience in safety training supported by modern learning technologies with GoRopes' domestic market knowledge and expertise will provide Polish companies and professionals with access to best-in-class training solutions that will enable them to work safely in high-risk environments.



Pictured at the contract signing (from left): Torben Harring – CEO of RelyOn Nutec, Lars Brenne – managing director of RelyOn Nutec in Central Europe, Mateusz Wiszniewski, Łukasz Łabędź, Mateusz Archacki – co-founders of GoRopes; Photo: RelyOn Nutec

– We are pleased, with our presence in Poland and cooperation with GoRopes, an established company that has built a strong market position in a very short period of time, since the start of operations in 2019 – said Lars Brenne, managing director of RelyOn Nutec in Central Europe. – Through this strategic collaboration, we will bring our cutting-edge training solutions to the Polish market and strengthen our commitment to the energy transition by supporting the development of human resources for the RES sector.

In the coming months, the Gdansk training center will expand its offer with new courses, such as GWO basic technical training, elevator operator training and EN50110-compliant electrical courses. All new training courses will be supported by the RelyOn learning platform.

– We look forward to working with the industry leader and developing our training offerings within the RelyOn Nutec group. Recognizing how fast our industry is growing in the Gdansk region and the entire Tri-City area, we believe this is the perfect time to take the next step in development – said Matthew Archacki, co-founder of GoRopes.



The decision to expand RelyOn to the Baltic Sea and open a training center in Poland is a natural consequence of the company's development, which has built a strong position in the North Sea. Operating worldwide, the company has 13 training centers in Europe – in the UK, Norway, Denmark, the Netherlands, Germany and Belgium. The acquisition of GoRopes demonstrates a commitment to the nascent offshore wind sector and to supporting the energy transition in the Baltic Sea region by creating a safer working environment in the challenging renewable energy sector.

About RelyOn Nutec

RelyOn Nutec provides security, compliance and professional services and solutions to support the energy transition. Through more than 30 branches, RelyOn helps customers protect employees, resources and the environment. With more than 50 years of experience, it successfully implements cutting-edge technologies for the energy and critical infrastructure security sectors. RelyOn Nutec is a leader in security and technical training and offers a wide range of cutting-edge digital services such as a digital learning platform, adaptive learning, simulation technologies and a suite of SaaS applications. For more information, visit: www.relyonnutec.com

About Go Ropes

Go Ropes is a reputable company based in Gdansk, Poland, known for its experience in training in accordance with Global Wind Organization (GWO) standards. It offers specialized courses aimed at professionals working in the wind energy sector. With a team of highly skilled professionals and advanced technical capabilities, Go Ropes has become a trusted provider of comprehensive services in the industry over the past few years. As a GWO training provider, Go Ropes adheres to the highest standards of safety and professionalism in the renewable energy sector. For more information, visit: www.goropes.com

Source: RelyOn Nutec

63.3 million euros to support investment in Swinoujscie seaport's capacity

26/06/2023



Poland has received PLN 4.4 billion in funding from the EU's Connecting Europe Facility (CEF) for transportation projects. June 21, 2023, a meeting of the CEF Coordinating Committee was held to approve the results of the competition.

Poland repeated its success from the CEF Transport 2021 competition and once again ranked first in terms of the value of funds raised. Poland has also been successful in obtaining funds from the general pool, in which all EU countries compete.

I am extremely pleased that Poland is continuing the favorable trend of raising funds for Poland's priority projects, including the currently key rail links in the north-south corridors, i.e. with the Czech Republic and Lithuania (Rail Baltica), as well as necessary investments in seaports, serving both to increase the global accessibility of Central Europe and the development of wind energy in the Baltic – said Polish Infrastructure Minister, Andrzej Adamczyk.

Among the projects that will receive funding from the CEF Transport 2022 competition are two projects from the offshore sector with a total EU funding of more than 165 million euros:

- **Port of Gdansk Authority SA**

Improving the infrastructure of the Port of Gdansk through the implementation of a low-carbon OPS system for the sustainable development of the TEN-T network; funding value €99.6 million, cohesive pool;

- **Szczecin and Swinoujscie Sea Ports Authority**

Building the capacity of the Swinoujscie seaport to meet the needs of offshore wind energy; funding value €63.6 million, cohesive pool.

A list of all funded projects is available on the website of the [Ministry of Infrastructure](#)

Source: Ministry of Infrastructure

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Lloyd's Register authorised by Polish Ministry of Infrastructure to conduct certification of offshore wind farms

28/06/2023



Lloyd's Register (LR) (under the Lloyd's Register Marine Limited entity) has been authorised by the Polish Ministry of Infrastructure to conduct certification of offshore wind farms in accordance with the requirements introduced by the Polish Ministry in 2022.

This authorisation will enable LR to continue certifying offshore wind farm projects globally, as it has done in many other locations, and support Poland to achieve its multi-GW offshore wind ambitions. Earlier this year, LR became a signatory to the Polish Offshore Wind Sector Deal.

The initiative was established by the Polish Government and is supported by developers, investors and suppliers including Shell, TotalEnergies and Ørsted, with the aim to implement the tight targets of offshore wind development, whilst strengthening the local economy with the creation of sustainable jobs in the offshore wind sector.

Wojciech Zwierzynski, Managing Director of Lloyd's Register Polska Marine said: "Lloyd's Register has a proud history in Poland dating back to the opening of our office in Gdansk in 1956. As a newly authorised offshore wind farm certifier in Poland, we look forward to supporting our clients in the region as trusted advisers in the offshore wind sector."

Source: Lloyd's Register

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Development of offshore wind farms in Poland as an opportunity for local communities new career paths

28/06/2023



Photo: windhunter_academy

The lack of skilled workers in the renewable energy industry is an important problem. This challenge is projected to deepen in the coming years, underlining the need for awareness-raising and development pathways for people wishing to move from other sectors. With this in mind, RWE and windhunter_academy have taken proactive action to tackle this problem effectively today.

Retraining of fishermen for offshore wind industry

The reskilling program is designed to reach a specific group of people, in this case fishermen. By selecting candidates ready for change and having the potential to meet the criteria for wind turbine technicians, the program gives them a chance to start a new career path. Participants undergo an intensive three-week course at windhunter_academy, where they gain comprehensive knowledge about technical aspects, take practical classes and receive training in technical English.



The participants themselves stressed that the dimension of knowledge and skills they acquired during the program will certainly make it easier for them to decide to change the employment sector and bring tangible benefits after working in the wind industry. They look optimistic about the future and look forward to the first employment

– I believe that the reskilling program proposed by RWE and windhunter academy has fulfilled its objectives. I feel fully prepared for work and new challenges in the wind industry. The training was conducted at the highest level, by professionals who gave us a large amount of knowledge in a very pleasant and friendly atmosphere, treating us as individually as possible.– Konrad Rus, participant of the reskilling program.

– The objectives of the program go beyond just completing the training. The main goal is to present job offers and facilitate safe employment in the wind industry, ensuring a successful career transition for each participant.– Karolina Jastrzębska, CEO of windhunter academy

Retraining for a sustainable future

As demand for renewable energy increases, programs such as this initiative become increasingly relevant. They provide communities with the necessary tools and knowledge for new industries, thus creating a sustainable livelihood.

Marcin Sowiński, Project Lead at RWE Offshore Development Poland, emphasises the importance of the program not only for building awareness about offshore wind energy, but also for providing real opportunities for individuals to connect their future with this dynamically developing sector. The program equips participants not only with practical skills and technical knowledge, but also develops soft skills and teamwork skills necessary in emergencies.

The fisherman reskilling program, implemented by RWE and windhunter academy, is an important step towards developing qualified staff for the wind industry in Poland. By offering new career paths in the renewable energy sector, the program gives individuals the opportunity to contribute to the development of this industry while safeguarding their own professional future. As the global energy landscape transforms to renewable energy, initiatives such as this play an important role in a prosperous future.

Thanks to the skills gained during the program, participants gained the necessary qualifications to start working on wind turbines in Poland and around the world. Completing the training is not only gaining theory and practice, but above all a real chance to find a job in the renewable energy industry.

Source: windhunter academy

Global trends are driving the maritime sector. The Invest in Pomerania report “Focus on Maritime Sector”

05/04/2023



Photo: Invest in Pomerania

Green propulsion, autonomous ships, digitization, and VR technologies – these are only some of the topics covered in the Invest in Pomerania report, where current technological trends have been correlated with local maritime industry situation.

Like most sectors of the economy, the maritime sector is strongly influenced by global trends focused on green technologies aimed at reducing of CO2 emissions, as well as advanced data processing solutions that streamline navigation and other operations at sea. These trends obviously guide the development of the local industry.

Towards green shipping and clean energy

Low-emission technologies have been implemented in the Tricity shipyards for years. Just to mention the series of LNG-powered ferries produced by Remontowa Shipbuilding or the hybrid ferries produced by Crist. The next step is to introduce alternative fuels –

currently, only 5.5% of the total gross capacity of ships in operation could use them. In comparison, for units currently in the order process, this figure is already 33% of their total gross capacity. It is hard to determine unequivocally which alternative fuels will dominate the market – hydrogen is becoming increasingly important these days, also methanol and ammonia are under discussions.

According to the report, Europe is a leader in the production of units with electric propulsion systems. In 2019, it was responsible for 34.9% of global production. An important element is the modernization of units, which includes converting propulsion systems or installing desulfurization systems – in this area, Remontowa Shiprepair is the leader. In 2019, it ranked ninth in the world in terms of the number of class repairs carried out on ships. Every year, Remontowa repairs or modernizes about 200 units, including the largest ships that can enter the Baltic Sea.

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It should also be remembered that the developing offshore wind sector will strongly affect the order portfolios of design offices and ship producers. According to the report, it is projected that by 2050, up to 660 GW of power from offshore wind energy could be installed worldwide. Currently, only 55 GW is installed. Such strong growth will require expanding supply chains, both in terms of new production capacities and diversifying orders in new technological directions.

Autonomous ships, intelligent ports

According to the report, the global value of the autonomous ship market is estimated to be over \$85 billion (for 2020). It is predicted that the value of this market by 2030 may equal even \$165 billion. Similarly, data consumption is increasing – the average daily data consumption per vessel unit has increased by almost 188% – from 3.4 GB in 2020 to 9.8 GB in 2021. Analysis of data related to current weather conditions will significantly contribute to reducing emissions, lower fuel consumption and safety improvement.

On the one hand, digitization in seaports translates into the creation of smart seaports, which represent the fourth generation of their development. We can talk, for example, about the use of blockchain technology in the process of data notarization, which enables the optimization of cargo storage processes, precise container localization in the transport process, which allows for a reduction in operational costs. On the other hand, ports are starting to use the concept of digital twins to optimize operations. Monitoring a digitized object will significantly contribute to predicting and detecting human errors, which will translate into an increase in the operational efficiency of ports.

Pomerania in a changing world

We live in very dynamic times, both in terms of geopolitics and technology. However, let us remember that these challenges provide a unique opportunity for further development of the local maritime sector in many areas – we are talking about port functioning, supply chain management, ship and offshore structure design and construction, R&D, certification, and IT solutions. We have enormous potential and competence to follow the latest trends, and the latest Invest in Pomerania Report confirms that – comments Mieczysław Struk, Marshal of the Pomeranian Voivodeship.

This is already the third Invest in Pomerania report from the Focus On series, where we focus on various industrial sectors in terms of global issues affecting the condition of these sectors in Pomerania. The reports are created in cooperation with companies conducting their activities in Pomerania, which allows us to shape the topic and further conclusions in line with how the business environment perceives the current situation. This time we had 18 partners, which corresponds to a very wide range of topics that we covered in the report – says Monika Wójcik, Senior Project Manager at Invest in Pomerania, coordinator of the Report.

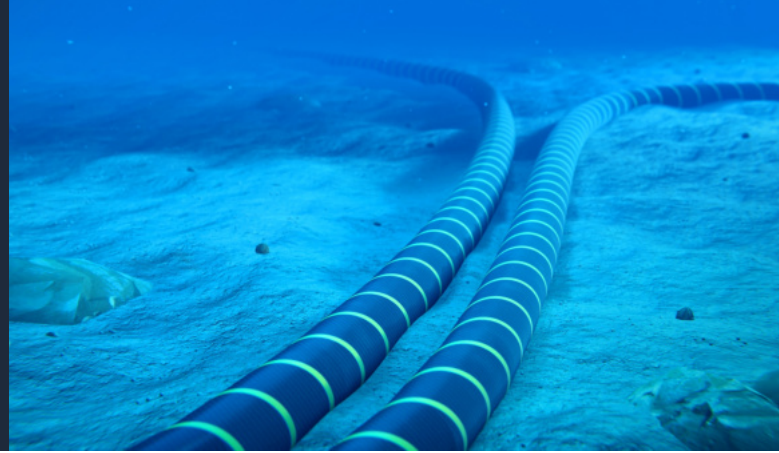
The report has been created with the cooperation of the representatives of the local companies related to maritime sector: Aluship Technology, Blue Dot Solutions, Center of New Competences, CTO S.A., Crist, Damen, DNV, Enamor, Equinor, F44, Mainstream Renewable Power, Mewo, Polish Maritime Technology Forum, Randstad, Remontowa Holding, Siemens Gamesa, StoGda and Sunreef Yachts.

Link to the report „Focus on: Maritime Sector in Pomerania“: <https://investinpomerania.pl/en/knowledge-base/focus-on-maritime-sector-in-pomerania/>

Source: Invest in Pomerania

PSE and Litgrid to hold new proceedings for Harmony Link construction

04/05/2023



Litgrid, Lithuania's transmission system operator, has decided to cancel a tender for the selection of a cable contractor for the Harmony Link project. As a consequence, PSE also canceled a tender for the construction of converter stations under this project.

The total investment cost, taking into account submitted bids, would be approx. 1.6 billion euros and would far exceed its budget, estimated at 680 million euros. PSE and Litgrid plan to repeat the procedure for the construction of Harmony Link.

Source: Polish Power Grid

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INTERNATIONAL COOPERATION

Transmission system operators from the Baltic Sea region strengthen cooperation for more energy sovereignty and climate protection

09/05/2023



The managers of the Transmission System Operator of the Baltic Sea Region after the meeting in Berlin. © 50Hertz / Sebastian Rothe

CEOs and other executives from the Transmission System Operators (TSOs) of the Baltic Sea countries met in Berlin to further intensify cooperation. The meeting was attended by AST (Latvia), Elering (Estonia), Energinet (Denmark), Fingrid (Finland), Litgrid (Lithuania), PSE (Poland), Statnett (Norway) and Svenska Kraftnät (Sweden).

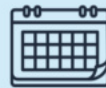
The companies' managers gave a positive assessment of how the critical supply situation last winter as a result of Russia's war against Ukraine was jointly managed. For example, the TSOs helped each other across borders to mitigate potentially critical network situations in advance. Measures included the procurement of fuel for system-relevant power plants as well as the establishment of permanent monitoring.




At the meeting, TSO representatives from Estonia, Latvia and Lithuania reported on the current status to synchronize with the continental European power grid by 2025. The TSOs reaffirmed their intention to cooperate even more closely to strengthen energy sovereignty and achieve climate change goals – and thus to integrate more and more electricity from wind and solar power into the grid infrastructure.

Chris Peeters, CEO of Elia Group, also attended the meeting as a guest. He reported on the North Sea Wind Energy Summit in Ostend on April 24 and what impetus it could also provide for development in the Baltic Sea.

Source: 50 Hertz

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EIU: Baltic States Amplify Offshore Wind Investments to Boost Energy Sector

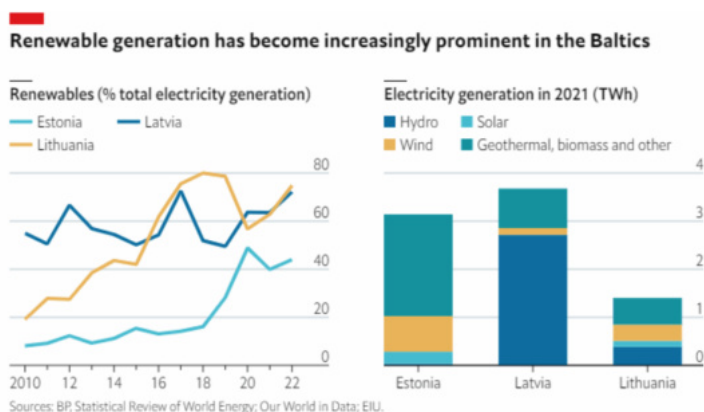
29/05/2023



Photo: Freepik

According to a recent report by the Economist Intelligence Unit, the Baltic states of Estonia, Latvia, and Lithuania are making significant strides in energy security, with a particular focus on the development of offshore wind farms. This move comes in the wake of Russia's invasion of Ukraine in February 2022, which prompted these nations to cease energy imports from Russia, including a complete halt of natural gas imports in 2022.

The Baltic states are not only investing heavily in new liquefied natural gas (LNG) infrastructure but are also scaling up their renewable energy capacities. A key part of this strategy is the development of offshore wind farms, which are expected to play a significant role in the region's energy diversification.



Source: EIU

Latvia, for instance, has developed an ambitious strategy to build at least 100 wind turbines that would produce 30% of Latvia's total 2022 electricity consumption. A new public company, Latvijas veja parki (Latvia's wind farms), has been founded to facilitate the rapid construction of these wind farms. Additionally, Latvenergo, the electricity utility, has signed a memorandum with the German multinational energy giant RWE AG to produce offshore wind farms. If both projects

proceed as planned, Latvia is likely to achieve its target of 800 MW of wind-generated power by 2030. Meanwhile, Estonia and Lithuania continue to invest in wind power. Lithuania is constructing a new wind farm and has signed a power purchase agreement with Eesti Energia, an Estonian energy company. The company is currently undertaking a strategic environmental impact assessment for what would be the first of four planned offshore wind farms in the Baltic Sea. Enefit Green, the renewables arm of Eesti Energia, has ambitious plans to produce 1,900 MW of renewable energy across its wind and solar plants in Estonia, Lithuania, Finland, and Poland.

Adding to this momentum, ORLEN NEPTUN, an offshore wind development company within the PKN ORLEN Group, has recently established a subsidiary in Lithuania. Named ORLEN NEPTUNAS, the company was registered in May and is expected to participate in this year's tenders in Lithuania related to the construction of wind farms in the Baltic Sea. The Lithuanian government's plans indicate that two wind farms with a capacity of 700 MW each will be built. In Poland, PKN Orlen's flagship project is the "Baltic Power" wind farm being developed in cooperation with the Canadian company Northland Power.

The Baltic states' commitment to offshore wind power and other renewable energy sources, coupled with their investment in LNG infrastructure, is expected to ensure their energy independence from Russia. The only remaining major energy link to Russia is through the electricity grids' connection to the Russian synchronous area, with synchronisation with continental Europe's grid not planned until 2026. However, the Baltic states are considering accelerating the disconnection from the Russian power grid, further solidifying their path towards energy independence.

Source: EIU

WindEurope: NZIA: act now or Europe's wind turbines will be made in China

15/06/2023



The EU wants to massively expand renewables and strengthen Europe's clean energy supply chains. But its Net-Zero Industry Act (NZIA) falls short and needs beefing up. If Europe gets NZIA wrong, it'll end up building wind farms with turbines manufactured outside of Europe, WindEurope CEO Giles Dickson explains in a [video](#). New data shows what's at stake economically.

Wind energy is key to Europe's energy security and climate targets. The EU want it to be 43% of Europe's electricity consumption by 2030, up from 17% today. That means building 30 GW of new wind farms every year.

Nearly all wind farms Europe has built up until today use turbines made in Europe. There are over 250 factories around Europe making turbines and components. But there are already bottlenecks in Europe's wind supply chain. Offshore foundation manufacturers and installation vessels are fully booked for several years. The wind industry is having to buy power cables, gearboxes and even steel towers from China. We're building a few new factories but not enough for the massive expansion of wind energy that Europe now needs. Huge investments are needed: in factories, ports, girds, vessels, cranes and skilled workers.

Need to beef up the NZIA

The rapid expansion needed in Europe's wind and other clean energy supply chains requires public policy and public financial support. The EU totally gets this – which is why they came up with their Green Deal Industrial Plan. But the NZIA which is at the heart of the Plan, falls a long way short.

The European Parliament and EU Member States in the Council are now amending the NZIA text.

A key thing to strengthen are the non-price criteria in renewables auctions. It's good that these will now be compulsory. Using only price in auctions has driven a 'race to the bottom'. Bringing in non-price criteria will reward the social, economic and environmental value that Europe's clean energy industries offer. They will incentivise innovative solutions to sustainability, biodiversity protection and system integration.

But the current text is timid on what criteria can be used:

- it talks about "supply chain resilience". The most resilient supply chain is local. Let's spell out that auctions should give extra points to developers who offer European technology;
- let's add something on cybersecurity. We don't want to build equipment that's exposed to cyber-attacks;
- let's add "due diligence" too. We can't be sourcing kit from places with questionable human rights records, or loose standards on labour and environmental protection; and
- let's drop the idea that you don't need to apply non-price criteria whenever costs go up by 10%. It's impossible to apply in practice and defeats the purpose for having non-price criteria in the first place.

The costs of getting NZIA wrong are huge

The costs of getting all this wrong are huge. Constraints in Europe's wind energy supply chain mean Chinese turbine manufacturers are now starting to win orders here, not least with their cheaper turbines, looser standards and unconventional financial terms (pay us only on completion of the wind farm or later). There is a very real risk that the expansion of wind energy Europe will be made in China not in Europe.

Quite apart from the new dependencies that would create just when we're trying to improve Europe's energy security, the economic losses would be huge. Latest data shows the European wind energy industry, with its 300,000 employees, contributed €42bn to EU GDP in 2022. Each new wind turbine installed in Europe generated on average €11m of economic activity. And the wind industry paid €7bn in taxes, including local taxes paid to communities living close to the wind farms.

It's a volume not an innovation game

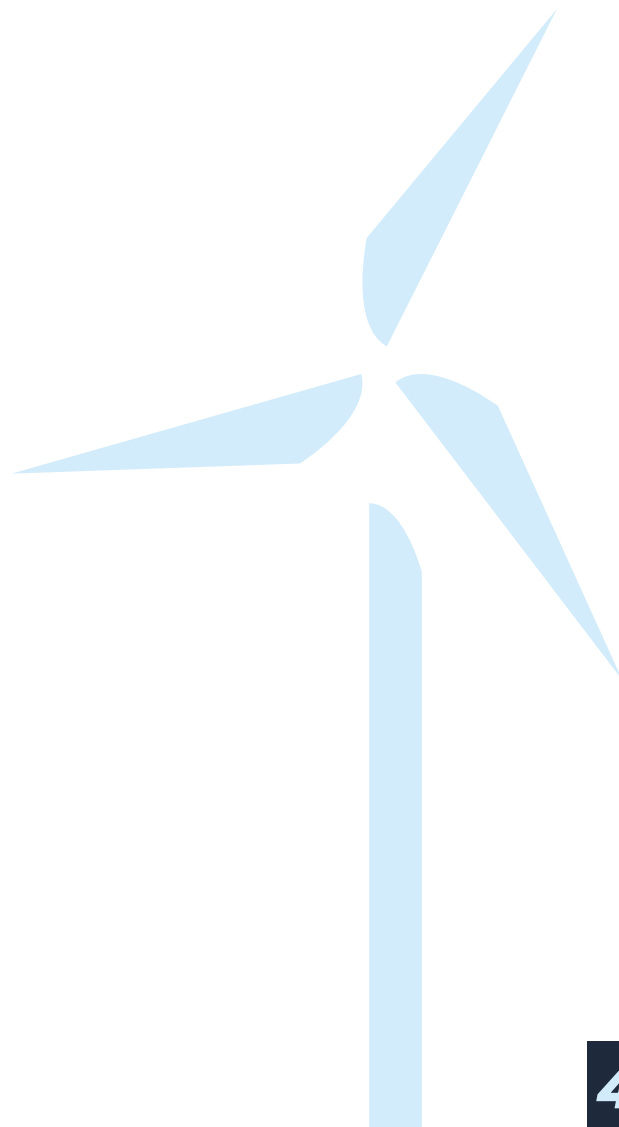
Alongside NZIA, the new EU state aid rules allow Member States to support investments in new factories making clean energy equipment. Good – national Government should exploit this to the fullest. But it's essential that the EU also puts its own money on the table. The new Sovereignty Fund cannot come soon enough. And the Innovation Fund needs less emphasis on technology breakthroughs and more on simply building out manufacturing capacity in Europe – especially for those technologies that are ready to deliver the big volumes of clean energy Europe needs.

At the same time Europe must keep a razor-sharp focus on the simplification of permitting rules and procedures. The bottlenecks here mean we're only building half the new wind farms Europe needs. The helpful new EU rules and deadlines should make a difference. In Germany where they're already being implemented, the number of new permits is up, and legal appeals are being unblocked. Other countries need to implement the rules as soon as possible.

And Europe needs to accelerate the build-out of electricity grids. Too many new wind farms are delayed because the grid connection isn't ready, or the TSO has a huge backlog of grid connection applications.

“Europe wants a green industrial policy. It wants renewables to be made in Europe. But it's failing on the policies that will actually deliver that. The Net-Zero Industry Act needs beefing up. Public money has to support the expansion of green supply chains, as it does elsewhere in the world. Otherwise the EU Green Deal will be manufactured outside of Europe, and Europe will simply swap its dependency on Russian gas for one on Chinese clean energy equipment. Our existing green supply chains bring jobs, growth and investment to thousands of communities. We've got to wake up and preserve that AND build on it. NZIA is our chance. We mustn't blow it”, says WindEurope CEO Giles Dickson.

Source: WindEurope



RED II: Breakthrough for an ambitious expansion of renewable energies in the EU

19/06/2023



On June 16, the member states of the European Union approved a comprehensive redesign of the EU Renewable Energy Directive (RED) in the Committee of Permanent Representatives. The European target for renewable energies will thus be significantly increased from 32% to 45% in 2030. This means a doubling of the share of renewable energies compared to the level achieved in 2021 of almost 22%.

This is a great success for the expansion of renewables: The planned expansion of renewable energies by 2030 will be roughly doubled. For the new targets, more than 100 GW of new wind turbines and solar systems will be installed in the EU every year. For Germany, this means that the greatly increased expansion targets for wind and solar energy in 2022 will be underpinned and binding by European specifications. The higher EU targets also form the framework for more far-reaching measures and targets in the EU, such as the EU 's solar strategy , which envisages approximately tripling PV capacity to 600 GW by 2030.

Federal Economics and Climate Protection Minister Robert Habeck: "I am very pleased that the Council today backed the March 30 agreement. The revised directive will massively accelerate the expansion of renewable energies throughout the European Union. We are raising the renewables target for 2030 from 32% to 45%. Wind and solar energy in particular are being expanded twice as fast as previously planned. The new European rules will trigger a boom in investments in renewables and make them legally binding. For us, this means: Our expansion targets for wind and solar energy, which were massively increased last year, are now underpinned by European specifications. This will make us less dependent on energy imports. For me it is very important that it is not only about goals, but also about measures. That's why I worked

to that we have now consolidated and permanently updated many of the approval accelerations for renewable energy projects that we agreed on in the 2022 energy crisis. Approvals come faster, planning is accelerated. Therefore, I am pleased that the European Union has the power to enable such a success for renewable energies."

The agreement also enables the breakthrough of renewable energies in sectors other than the electricity sector. Binding targets for the use of renewable energies now apply in each individual country in the heating sector, transportation and industry. Switching to renewable energies in all sectors will become mandatory at the European level. In Germany alone, for example, industry will have to use hydrogen from renewable energies on a large scale in 2030, around 20-25 TWh. To ensure that the targets are also translated into measures, there are threats of infringement procedures if a country does not meet its sector targets.

In addition, approval procedures are significantly and permanently accelerated. Among other things, specific deadlines are set for this: the approval process for new renewable energy projects in certain areas must not last longer than 12 months. It is also important that hydrogen from nuclear power is still not counted towards EU targets – the RED only counts renewable energies towards the targets.

In addition, on June 16 there was an agreement on the market ramp-up, especially for e-fuels in aviation, the so-called "ReFuelEU Aviation". The EU is introducing a market ramp-up quota for e-fuels ("RFNBOs") in the aviation sector, from 1.2% e-fuels in 2030 to 35% e-fuels in 2050. In total, 70% of aviation fuels in 2050 be renewable. In aviation, e-fuels are particularly important because direct electrification is only possible to a limited extent.

Background to the agreement on the Renewable Energy Directive:

• Raising the overall target

The agreement that has now been reached on an amendment to the EU Renewable Energy Directive (RED III) provides for the EU 2030 target for renewable energies to increase to a total of 45% of total energy consumption (gross energy consumption). As before, 42.5% are to be provided as binding by the member states. The existing governance regulation ensures that this goal is actually achieved. For example, concrete measures are taken if there are indications that the expansion of renewables is not yet sufficient. There is also an indicative additional target of 2.5 per cent. This “top-up” is to be achieved through further voluntary contributions from the member states or through pan-European measures. The EU is thus doubling their ambition in the expansion of renewable energies. According to initial projections, the German targets are sufficient to achieve the new EU targets. Now we have to do everything we can to achieve our national expansion goals.

• Nationally binding sector targets for 2030 ensure that renewable energies are not only used in the electricity sector.

The agreement introduces further binding, national sector targets for the use of renewable energies. If a member state does not comply with these binding sector targets, there is a risk of infringement proceedings. The share of renewable energy must grow by 0.8 percentage points each year between 2021-2025 and by 1.1 percentage points annually thereafter. In addition, there is a new, indicative building target of 49% renewable energies for the heat requirement in buildings. In the transport sector, the already binding target increases from 14% to 29%. A new binding transport target includes a combination of electricity-based renewable fuels (RFNBOs) and advanced biofuels. This sub-target is 5.5%, of which 1% is to be covered by hydrogen and other electricity-based fuels (RFNBOs).

A new mandatory target for the use of hydrogen and other electricity-based fuels (RFNBO) will be set in the industrial sector. 42% of the hydrogen consumed in the industry in 2030 must come from renewable energy sources. This corresponds to an increase of around 20 to 25 TWh. By the year 2035, the share should increase to 60%. Depending on the scenario, around 41 to 83 TWh of hydrogen from renewable energy sources are required in Germany for this purpose, since industry is using more and more hydrogen at the same time. In addition, as a new indicative target, the share of renewable energies in the total energy consumption in the industry should increase by 1.6% every year.

• Regulations for accelerating the expansion of renewables are updated indefinitely and permanently

The regulations for accelerating the approval process for the expansion of renewable energies and grids, which were decided in the EU emergency regulation, will be laid down as far as possible. For example, the expansion of renewable energies and the grid is in the overriding public interest and time-consuming assessment steps can be dispensed with in the priority areas (no second environmental and species protection assessment at the project level if there has already been an assessment at the planning level). However, this only applies if appropriate avoidance or compensation measures have been taken, i.e. the level of nature protection remains high.

• New impetus for cross-border projects

In addition, there is a new impetus for cross-border renewable energy projects: every Member State must tackle at least one cross-border cooperation project; so that cooperation can be strengthened. Such cooperation projects include, for example, joint offshore projects. Germany is one of the pioneers in the EU with the recently signed German-Danish offshore project “Bornholm Energy Island”.

• Low-carbon fuels do not count towards the EE targets

A compromise was also found on the long-standing issue of crediting low-carbon combustibles and fuels (so-called “low-carbon fuels”), such as hydrogen based on nuclear power. Low-carbon fuels do not count towards the EE targets. So there is still a clear distinction between green H₂ and low carbon H₂. The Federal Government had emphatically advocated this in advance. Member States that meet their national target contribution to the EU 2030 target and whose industry uses almost exclusively decarbonized fuels receive a discount on the hydrogen sub-target in industry and thus a little more flexibility.

• Ramp up of e-fuels in air traffic

The simultaneous agreement on ReFuelEU Aviation means that e-fuels in air traffic are highly encouraged where they are urgently needed since direct electric drives are hardly possible here. This means that what has been law in Germany since 2021 now applies at the EU level: the German e-fuels quota was the world's first obligation to use these fuels. Across the EU, at least 1.2 % of e-fuels must now be used by 2030 and 2 % by 2032. The rate will rise to 35 % by 2050. In total, at least 70 % renewable aviation fuels must be used in the target year 2050, i.e. in addition to e-fuels also biofuels from residual and waste materials.

IRENA: Annual Renewable Power Must Triple by 2030

28/06/2023

IRENA's World Energy Transitions Outlook calls for annual renewable power additions of 1,000 GW by 2030 to keep 1.5°C climate target within reach.

Abu Dhabi, United Arab Emirate, 22 June 2023 – In the first volume of the World Energy Transitions Outlook (WETO) 2023 released today, the International Renewable Energy Agency (IRENA) identifies the way forward to immediately course correct the 1.5°C climate pathway. The report calls for raised global ambition in renewables deployment, enabled by physical infrastructure, policy, and regulations, and underlining institutional and workforce capabilities.

The WETO 2023: 1.5°C Pathway positions electrification and efficiency as key transition drivers, enabled by renewable energy, clean hydrogen, and sustainable biomass and tracks implementation across all energy sectors. According to the latest edition, some progress has been made, mainly in the power sector with record additions in global renewable capacity of 300 gigawatt (GW) in 2022. However, the gap between what has been achieved and what is required continues to grow.

More ambitious renewable energy targets are needed; the world must add an average of 1,000 GW of renewable power capacity annually by 2030, as well as significantly increase the direct use of renewables in end-use sectors. With the first Global Stocktake concluding at COP28 in the UAE, WETO provides much-needed clarity on priority actions in the coming years.

IRENA's Director-General Francesco La Camera said: "We face the harsh reality that we are not on track to deliver on the Paris Agreement. Our only option is to follow the most promising, science-based pathway one that puts renewable energy at the centre of



Photo by Efe Kurnaz on Unsplash

the solution, while leading countries to energy security, reduced energy costs, and forward-looking industrial development. The energy transition must become a strategic tool to foster a more equitable and inclusive world. COP28 and the Global Stocktake must not only confirm our deviation from a 1.5°C pathway, but also provide a strategic blueprint to steer us back on track." worked

The COP28 President-Designate, H.E. Dr Sultan al-Jaber, said: "A goal alone is not enough. This report provides us with a solid pathway to implementation and I welcome IRENA's recommendations. I have called for a tripling of renewable energy by 2030, which is in line with IRENA's WETO report. The speed at which the energy transition happens depends on how quickly we can phase up zero-carbon alternatives, whilst ensuring energy security so that nobody is left behind. We also need the political will to create the necessary conditions to rapidly scale up renewables. This must create the frameworks for end-to-end delivery and provide the accessible and affordable finance necessary for project pipelines. To meet our 2030 targets, we need urgent action to fast track expansions of grid infrastructure, to reduce permitting timelines, and to reduce the cost of capital in emerging markets and developing economies. I was glad to recently reaffirm a shared commitment with the EU to ensure maximum support among parties at COP28 to triple renewable energy by 2030. The COP28 Presidency also announced this week that Kenya will champion the drive in Africa for tripling renewable energy capacity by 2030."

Focusing on the enablers of a renewables-dominated system can help address the structural barriers hindering progress in the energy transition. WETO has identified that getting the 1.5° pathway back on track requires addressing the following barriers:

- 1. lack of physical infrastructure,**
- 2. absence of enabling policies and regulations,**
- 3. misalignments in skills and institutional capacity.**

Adding speed and scale to the energy transition requires rewriting international cooperation. This necessitates an assessment of the roles and responsibilities of national and regional entities, international organisations, international financial institutions and multilateral development banks to ensure their optimal contributions to the energy transition. It also means ensuring that funds reach the world's most vulnerable.

WETO provides the analyses and the narrative for COP28 and the call by the COP28 President-Designate to build coalitions that deliver end-to-end support across the renewables ecosystem and enables us to triple renewable energy capacity as part of a just energy transition that leaves nobody behind.

IRENA works closely with countries to support the development and implementation of renewable energy policies and strategies in line with the 1.5°C Pathway outlined in WETO. The Agency also provides technical assistance and capacity building to help countries to increase the share of renewables in their energy mix.

Read the full [WETO: 1.5°C Pathway, Volume 1](#).

Source: IRENA



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