



Baltic Power

– Contribution of the 1.2 GW offshore wind project
in Poland to EU's energy transformation

Sofitel Brussels – Monday 27th March 2023

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Baltic Power



About Baltic Power

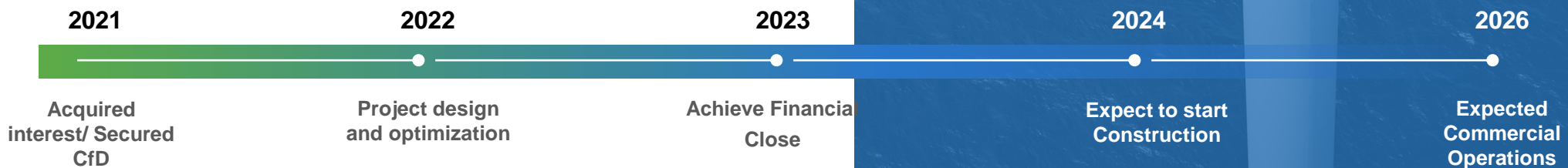


Joint venture agreement signed in January 2021

51% PKN ORLEN

49% Northland Power

Timeline For Baltic Power Development



Technical Details | Location & basic technical parameters



Technical parameters of the offshore windfarm (OWF) BALTIC POWER

Area	130 km ²
Distance to shore	22,5 km
Capacity	1140 MW
Water depth	33 – 45m
Single turbine capacity	15 MW
Foundations type	Monopiles
Power transmission technology	HVAC
Offshore Substations	2
Onshore Substation	1
Export Cables	4
Operational time	25-30 yrs +





PKN ORLEN



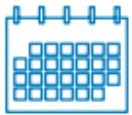
- 01.** Largest Oil & Gas Company in CEE with 7 refineries and over 3000 fuel stations across **5 markets (over 15 million customers)** and **3 million electricity consumers**. Active also in petrochemicals with 40 products in over 60 countries.
- 02.** One of the major players on the Polish energy market with a generation capacity of **3.4 GWs including 700 MW** in renewable energy sources and 1.1 GW in natural gas.
- 03.** PKN ORLEN plans to use the investment in offshore wind power generation – one of the key facets of the ORLEN2030 strategy – **to become the energy transition leader in the region** and aims to become **carbon- neutral by 2050**.

- 04.** Accordingly to the recently updated strategy by 2030 ORLEN Group plans a portfolio of RES with a **total capacity of up to 9 GW** (previously 2,5 GW).
- 05.** The ORLEN Group finalized (2nd Nov. 2022) its merger with PGNiG, establishing **Central Europe's largest energy group ranking among top 150 companies in the world by revenue and serving more than 100 million customers, with ca. EUR 85 billion earned in revenue annually**. The merger will help step up the ongoing projects, such as the construction of offshore wind farms.



- **Global independent power producer** dedicated to helping the clean energy transition by producing electricity from clean renewable resources.
- Founded in 1987, Northland has a long history in green power infrastructure assets and is a global leader in OW.
- Headquartered in **Toronto**, Canada, **publicly traded** on the Toronto Stock Exchange (TSX:NPI).
- Owns or has an economic interest in 2.7 GW (net 2.3 GW) of operating generating capacity and a significant inventory of early-stage development opportunities encompassing nearly 4.0 GW of potential capacity.

Who We Are



34+

Years of sustainable energy solutions



12

Countries with active development



27+

Projects



1,000+

Employees

Our Impact



+1m

Households provided with clean energy



3GW

Of gross renewable energy capacity



1.32m

Million tonnes of avoided CO₂e

Our Targets



65%

Reduction in carbon intensity by 2030



6.5GW

Expected gross capacity by 2027



Contribution of the project to EU climate and energy policy objectives



Affordability
Cheap electricity – LCOE estimated at ca. **70 EUR/MWh** well below market prices.



Energy security
Indigenous energy source and the most stable of intermittent RES – ca. **45%** net load factor.



Climate
Zero emission energy source saving ca. **83 mln tons** of CO2 emissions over 25 years of operation.



With 1,2 GW capacity Baltic Power will contribute to fulfilling **Marienberg Declaration** which assumes **19,6 GW** installed in OWF by 2030.

Offshore wind checks all the boxes of the EU climate energy policy's main pillars providing **affordable electricity** from a **domestic energy source**, while **saving CO2 emissions**.

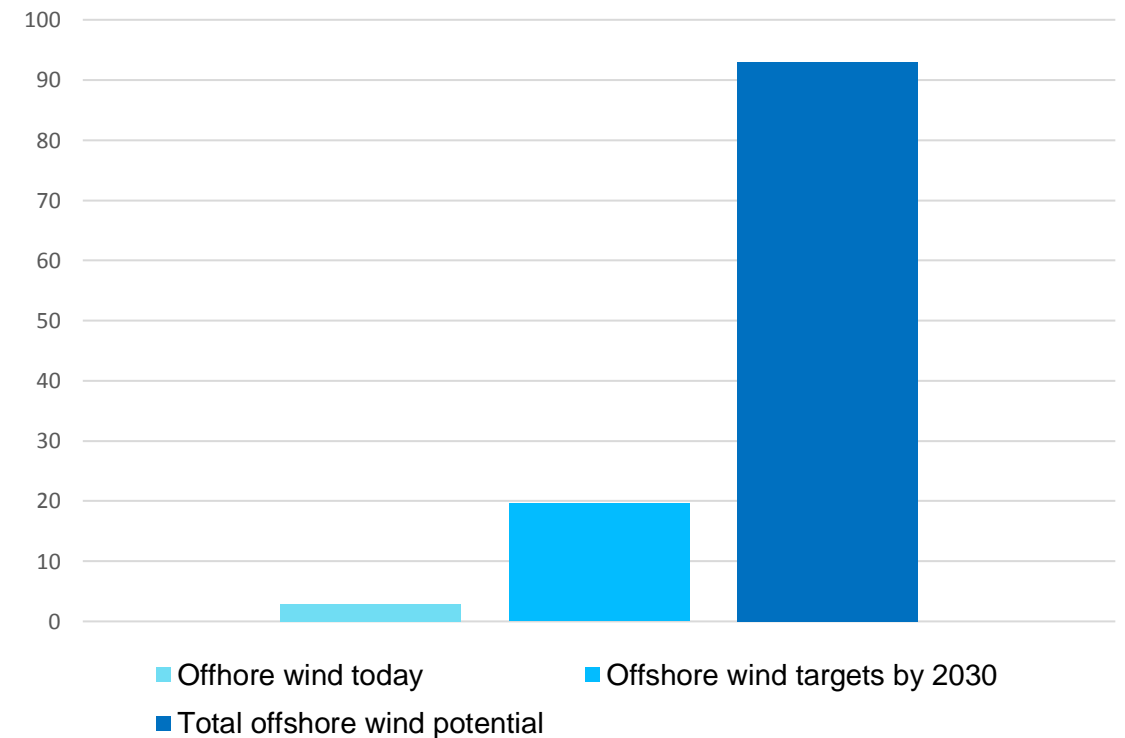


High potential of the Baltic Sea for offshore wind still to be untapped



- We are only starting to untap the vast potential of offshore wind in the Baltic Sea with only **2.8 GW installed today and 93 GW** of total potential.
- Current crisis connected to the war in Ukraine, extremely high electricity and fossil fuel prices, and the need to limit energy dependency necessitate an **acceleration of OWF development.**
- The Baltic Power project will clearly contribute to realising EU RES targets as well as fulfilling the Marienborg Declaration by swift development of **1.2 GW of new OWF capacity by 2026.**

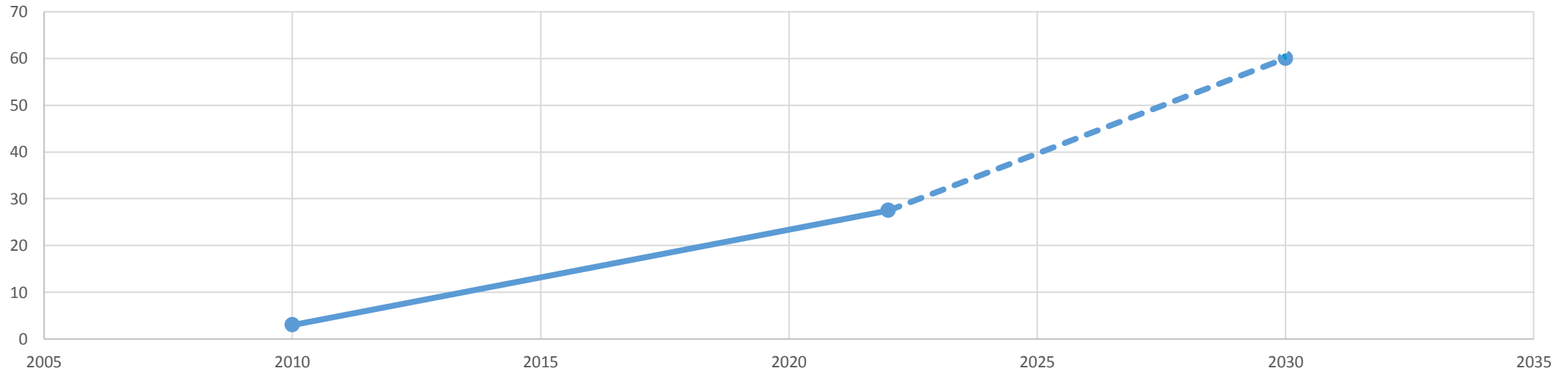
Offshore wind capacity on the Baltic Sea today vs. its potential (in GW)



EU offshore wind development plans by 2030 require rapid deployment which puts pressure on the limited EU supply chain



Historical and projected EU offshore wind installed capacity (in GW)



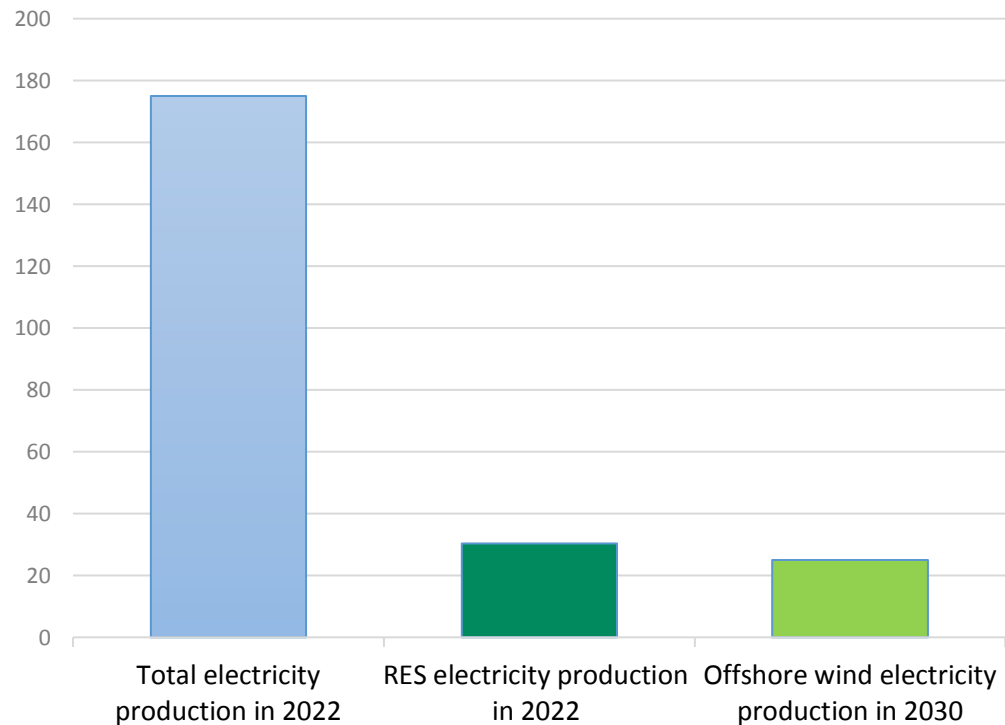
- To meet the 2030 EU Offshore Wind Strategy objective we need to accelerate the deployment - **over 30 GW of new capacity in only 7 years.**
- This will make it **difficult to maintain EU-based supply chain** as there is a demand crunch and costs are increasing.
- Offers from outside of Europe will become even more competitive.



First ca. 6 GW of OWF by 2030 will almost double current RES-based electricity production in Poland



Total and RES electricity production in Poland in 2022 vs. planned OWF production in 2030 (in TWh)

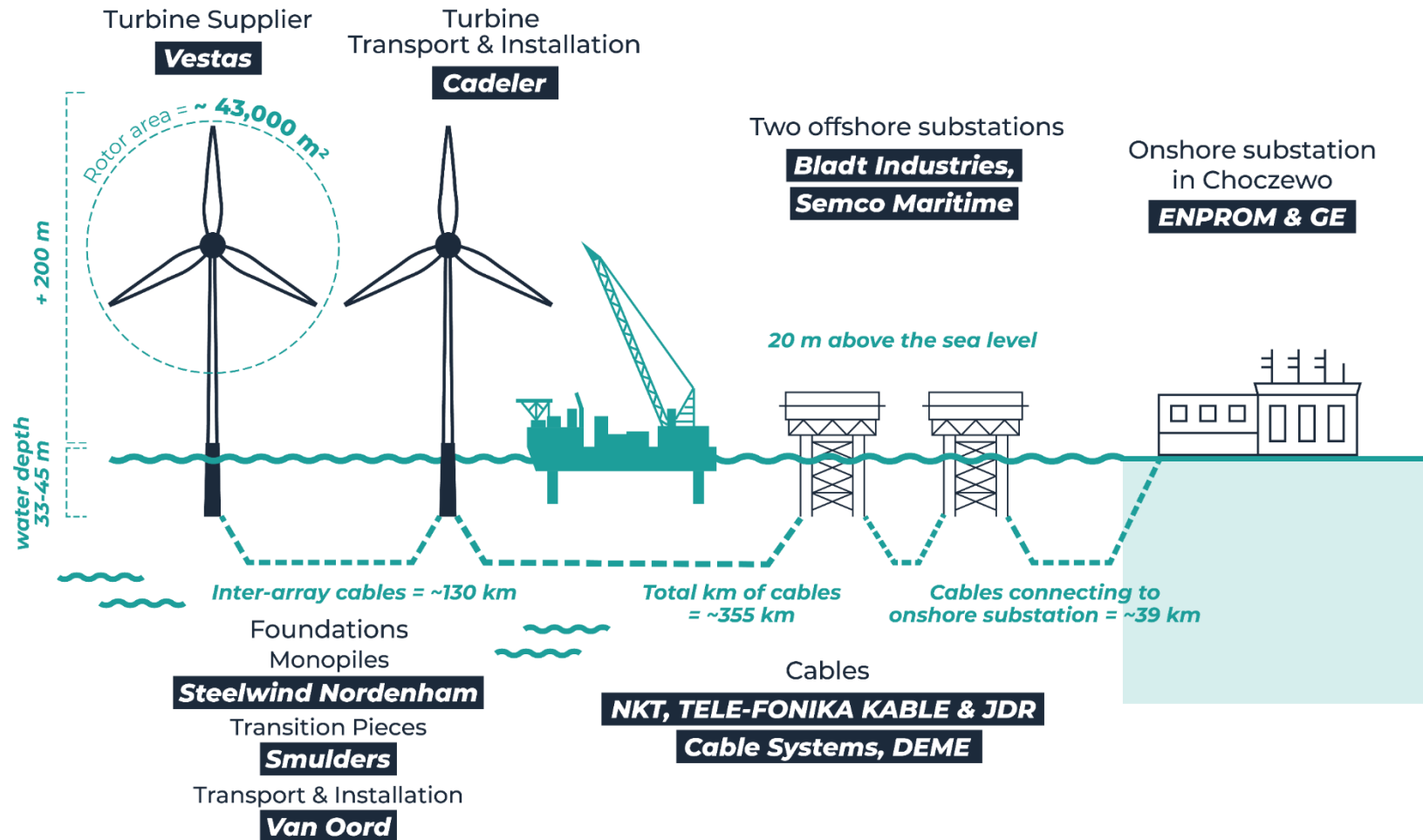


● OWF production by 2030 will reach **ca. 25 TWh** vs. **ca. 30 TWh** of RES electricity production in Poland in 2022 – almost doubling current total RES numbers

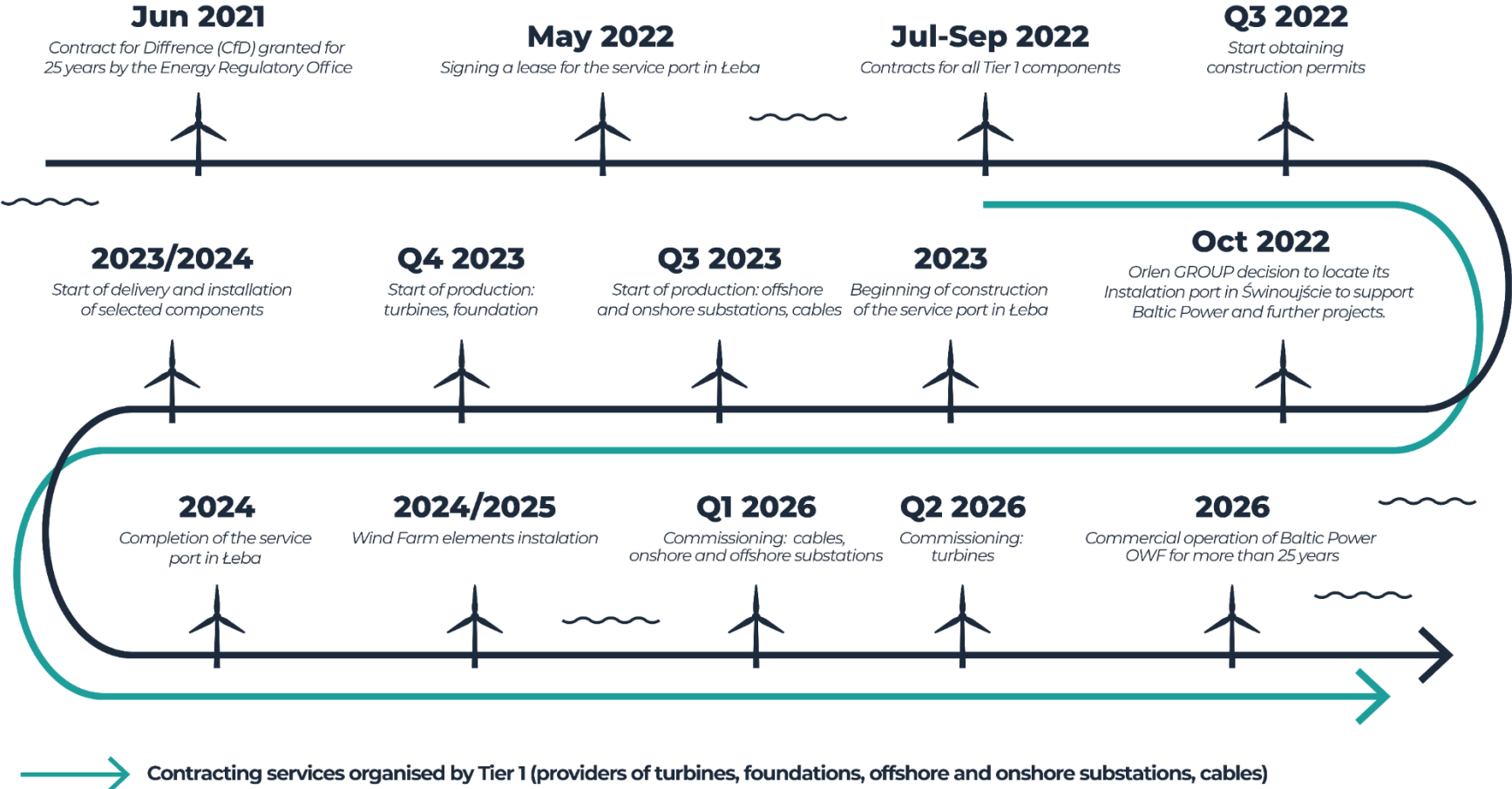
● 2030 OWF production in Poland will cover annual electricity consumption of **ca. 12,5 mln households**.



Almost all of the key components delivered by EU companies - fully European supply chain aligned with the new Net-Zero Industry Plan



Baltic Power on target to deliver first offshore wind electricity in Poland by 2026



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Schedule is ambitious given the current problems in the supply chain, but realistic.



Baltic Power's OWF project will contribute to the NZIA – key partnership with Vestas

The Baltic Power project will contribute to realisation of the Net-Zero Industry Act proposed by the European Commission on the 16th of March, by procurement of almost entirely EU-made components and appliances.

This will help meet the EU manufacturing capacity objective to have 40% of the EU's wind energy deployment needs by 2030 delivered domestically (at least 36 GW of capacity/year).

The deal with Vestas will add a boost to the EU wind turbine industry and allow it to improve its global trade balance, as it is facing growing competition.



The nacelle of the V236-15.0MW turbine that will be assembled at the Szczecin plant





Baltic Power's OWF project is the most advanced one in Poland and will deliver first electricity by 2026

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Baltic Power 1,2GW project is heading for **first power delivery in 2026** and is **the most advanced project** on the Polish part of the Baltic Sea.

It will play a **major role in fulfilling 2030 offshore wind targets of 5.9 GW** of capacity stipulated in the Polish Energy Policy by 2040.

The project has already **secured environmental decisions for both onshore and offshore part of the project**. **Baltic Power has secured (as first project in Poland) building permits for onshore part of the project.**

A support scheme in the form of **Contract for Difference** has been notified to the **European Commission** and is subject of **second decision by the Energy Regulatory Office**

Baltic Power, as a signatory of the Polish OW Sector Deal, is determined to develop high local content => Vestas announced construction of a turbine factory in Poland (Szczecin) triggered by the Baltic Power contract. **Factory will employ ca. up to 700 people.**

As all main contracts are secured selected suppliers will contribute to the local content requirement ultimately **securing it at 20-30%** (in the entire lifecycle of the project). T1 Polish Suppliers: ENPROM, Telefonika Kable, Erbud. More Polish companies to come as sub-suppliers.



Main challenges remaining

The project is being developed according to plan, but key challenges remain:

The need to **speed-up the project's development process** in the midst of the ongoing Energy crisis in Poland and the EU.

Delivery of **fully European supply chain** is becoming an **economic challenge** tight supply in Europe.

The recent acceleration of the permitting for new RES in REpowerEU is a positive step

Need to revisit the level of envisaged support in the form of CfDs.

Ensuring fair financial profitability of the projects in a currently adverse macroeconomic environment => strong increase in commodity prices and financing costs (due to inflationary pressure), supply crunch, volatility in currency exchanges.





THANK YOU

www.balticpower.pl