

POLISH OFFSHORE – ON THE VERGE

FIFTEEN YEARS AGO, BERND VON WIEDING, A FARMER IN THE NORTH OF POLAND, HAD A VISION: HARNESS THE POWERFUL AND STEADY WINDS COMING FROM THE POLISH BALTIC SEA TO GENERATE ELECTRICITY. INSPIRED BY THE EARLY OFFSHORE WIND PIONEERS IN THE NORTH SEA, HE EVENTUALLY SUBMITTED HIS FIRST OFFSHORE PROJECT SITE APPLICATIONS – THE BEGINNING OF THE 350 MW FEW BALTIC II PROJECT.

BY **UDO SCHNEIDER**, DIRECTOR, **GREEN GIRAFFE**.

Others, betting on a prospering renewables future, also saw the potential of this resource just off the coast. Local heavyweights Polenergia, PGE, and PKN Orlen, to name but a few, also submitted applications.

However, government policy did not favour the sector quite yet, even after the Renewable Energy Sources Act (RES Act) was passed in February 2015. Local coal remained the primary source of electricity, although Poland's onshore wind market did manage to grow to become one of Europe's largest markets.

Early political opposition

But this all changed with the election in 2016. Conservatives opposed to the continued rapid expansion of onshore wind won power and applied the brakes by imposing drastic changes such as a much higher minimum distance between onshore turbines and nearby homes and significant increases in property taxes.

These punitive measures turned the investment climate distinctly chilly and almost overnight a series of promising development-stage onshore wind projects became stranded assets.

Consequently, development efforts for more ambitious offshore projects such as FEW Baltic II suddenly seemed even more hopeless. For FEW Baltic II, the lengthy and costly environmental surveys needed and the search for partners to take development forward were especially challenging at the time.

The early pathfinder projects

While many investors left the country following these anti-renewables changes, Green Giraffe worked with Baltic Trade and Invest, the owner of FEW Baltic II, to bring in Van Oord, the marine construction company and form a development partnership.

Against significant odds the partners concluded that something could still be done. With high electricity prices, additional pressure from carbon pricing to come and Poland being in the spotlight of the European Union for missing climate targets, pressure to establish renewable capacity in the country was mounting.

It seemed obvious that offshore wind would be part of the Polish answer, as the entities with the largest development portfolios were almost all state-controlled and the country actually already counted many industrial players supplying the

global offshore wind sector, relying on exports to projects in other countries.

Opening the local market could make them even stronger. In fact, recent research by the Polish Wind Energy Association (PWEA) suggested that more than 100 Polish companies could deliver up to 50% of the required components and services for the offshore wind industry. PWEA estimates that offshore wind farms with a total capacity of 6GW to start with would help create around 77,000 new jobs and contribute about Z60bn (€14bn) to the country's economic growth had a real political impact.

In the meantime, significant amounts have been spent by the Polish offshore wind pioneers to take the necessary development steps for their projects. That said, the lack of formalised approval procedures, obscure permitting requirements and unpredictable timelines for offshore wind made these projects real pathfinder missions.

The importance of environmental surveys

The first party to complete an environmental survey and to obtain the required environmental decision from the authorities was Polenergia. Obtaining such environmental decisions takes significant time and resources for all parties involved, with extensive multi-year surveys to be done.

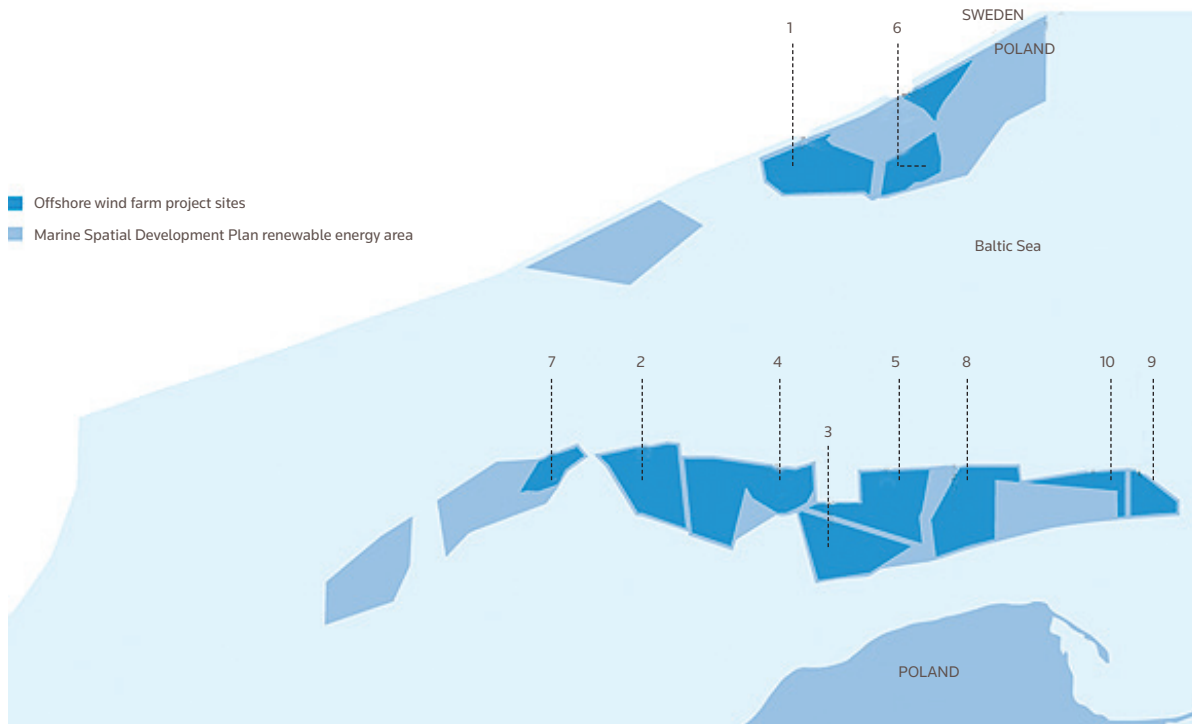
This procedure is by no means simple. Even PGE, the national power company, still awaits its environmental decision despite submitting documentation in 2018. It does not help in this context that the draft marine spatial development plan has yet to be formally adopted.

How should potential cumulative environmental effects of offshore wind projects be assessed if it is not clear where they will be located? Expectations are that the marine spatial development plan will finally be adopted in 2020, a crucial milestone for future projects that have applied for site permits but for which decisions are pending.

Grid connection

The path to connect offshore projects to the grid could also benefit from more clarity. While only a few projects have firm grid connection agreements (GCAs) with the transmission system operator, many have at least grid connection conditions (GCCs), which – if accepted – could eventually be turned into formal GCAs.

DIAGRAM 1 - OFFSHORE WIND PROJECTS



No	Project	Area (sq km)	Size (MW)	Connection status
1	Polenergia/Equinor – Baltyk I	128	1,560	GCC
2	Polenergia/Equinor – Baltyk II	122	600	GCA
3	Polenergia/Equinor – Baltyk III	116	1,200	GCA
4	PGE Baltica 2	189	1,498	GCC
5	PGE Baltica 3	131	1,045	GCA
6	PGE Baltica 1	108	–	–
7	RWE Renewables – Baltic Trade & Invest	42	350	GCC
8	PKN Orlen – Baltic Power	189	1,200	GCC
9	EDPR – B-Wind	189	–	–
10	EDPR – C-Wind	189	–	–
Total		1,084	7,093	

GCC: Grid Connection Conditions, GCA: Grid Connection Agreement

Source: Polish Wind Energy Association

However, connecting the projects to the grid will require significant investments and it still remains to be seen who will pick up the cheque. Is it the national transmission system operator PSE or will projects need to chip in? And if so to what extent? And that is just for the onshore part of the grid connection infrastructure.

The responsibility for the offshore infrastructure is not much clearer. Initially, PSE liked the idea of extending its responsibility beyond the shoreline and connect projects offshore – following the German TSO model.

However, this idea was quickly discarded and, most likely, projects will now be tasked to build their own grid connections to shore as an integral part of their construction plans. This may be for the better from a financing perspective, as it reduces the risk of delays with the grid operators.

CfD – Auction system outlook

Last but not least: a comprehensive offtake framework for offshore wind is still missing. While the RES Act, last amended in August 2019, does

mention offshore wind, it still falls short of the necessary details.

Two years ago, in November 2017, officials sparked some excitement by announcing that the first pioneering projects in Poland would get a directly awarded feed-in tariff. Certainly, good news and confirmation of the fact that the next growth market for offshore wind would be Poland.

But key details are still unclear: Which of the projects get a direct tariff? What are the qualification criteria? How will such tariff mechanism work? Will projects be compensated for any grid investments? Will the next wave of projects with permits or site applications need to participate in auctions? Will the EU approve such state-defined tariffs?

Behind the scenes the regulatory framework has been pushed forward to find balanced answers to these and other relevant questions, supported by several industry and government initiatives.

The overarching objective has been to adopt best practices from other markets, take lessons learnt into account and balance the requirements of developers under competitive tension. The end

objective of all of this is to bring down the risk-adjusted cost of electricity against installing needed generation capacity in the not too distant future.

It is understood that the key features of the so-called Offshore Wind Act have been drafted and Poland, following the well-trodden path of already established offshore wind markets, will develop its capacity pipeline in a phased approach.

Developers expect that the long-awaited Offshore Wind Act will indeed enable the first round of projects at an already advanced development stage to secure a contract for difference (CfD) directly awarded by the government.

A two-sided CfD would make most sense, whereby lower market prices are compensated and revenues from higher than CfD level merchant prices are to be returned.

Players are pushing for of the strike price of the CfD to be linked to individual project characteristics. Such direct support for the pioneering projects seems sensible in light of the significant development money already at risk and the fact that the projects are at different stages of advancement.

It is important to realise that only a handful of projects have received the environmental decisions and have GCAs in place. This poses the difficulty of defining common qualification criteria that would allow a series of projects on a level-playing field to compete with the required certainty that the winning project(s) will also be executed in a timely manner.

In addition, and this is unique to Poland, with the increasing electricity demand and the expected shut-downs of some ageing coal-fired power plants Poland needs to urgently add substantial generation capacity – not just replace it as other countries are doing.

In a second phase, projects that either did not qualify for a directly awarded CfD or whose applications are still pending and depend on the adoption of the marine spatial development plan, will compete in auctions for a CfD, likely to be applicable post-2022.

The final step is to tender pre-developed sites in the Polish Baltic Sea, similarly to what has been done in the Netherlands and Germany. In any case, the Offshore Wind Act will need to be approved by the European Commission. While there are good arguments for the introduction of such regulation, the outcome is by no means certain and will take time even though consultations are already under way.

Furthermore, any offshore initiative needs to fit within the overall long-term energy policy of Poland. Earlier in 2019 the first draft of such a policy framework, the Energy Policy of Poland until 2040 was published. The document envisaged more than 10GW of offshore wind to be installed in the Polish Baltic Sea and onshore wind to be eventually phased out.

However, the latest draft from the end of November 2019 reduced the target to 8GW and opened the door for onshore wind again. The PEP 2040 also envisages the construction of new nuclear power plants – but whether the latter will actually happen and be cost-effective is an open

question. Notably the document acknowledges the importance of offshore wind as “having the greatest prospects for development given the prevailing economic and technical conditions”.

These are critical times for policy-makers. One of the first measures of the re-elected government was to split up the Energy Ministry into a new national assets ministry – which will manage the energy and mining companies and thus oversee billions of euros worth of state assets – and a new climate ministry.

The climate ministry will be headed by Michal Kurtyka, who served as president of the 2018 United Nations Climate Change Conference in Katowice last year. He should be familiar with the requirements to fight climate change.

The next step is to pass the draft offshore act through parliament, which was due in December 2019 with much anticipation but looks more likely to happen early in 2020.

Market reaction

Offshore wind developers are patiently preparing themselves. To avoid costly mistakes and support the funding of their project pipelines they have been looking for in-house experts and financial capacity. In practice, all Polish offshore wind pioneers, including the large state-owned players, have been or are still searching for such international partners.

The first move in this direction was done by Polenergia, which partnered with Equinor for their first two 600MW projects Baltyk III and Baltyk II already in March 2018. On December 10 2019, Equinor completed another acquisition, getting a 50% interest in the offshore wind development project Baltyk I from Polenergia.

At-end 2018, PGE announced that it was looking for investors to join the development of its offshore wind projects to prepare, build and operate the Elektrownia Wiatrowa Baltica-2 wind farm with up to 1,500MW and Elektrownia Wiatrowa Baltica-3 with up to 1,045MW.

In October 2019, it was announced that Orsted would be the preferred party to continue the discussions and take 50% stakes in the project companies. PKN Orlen is also currently talking to potential partners to help on its project development. PKN Orlen's project development is not as far advanced but it is catching up quickly.

And Bernd von Wieding and his partners? They were also looking to sell 50% of the project company developing the FEW Baltic II project.

For all the strong interest from strategic investors active in offshore wind to unlock the Polish market, there are just as many hurdles in an ever-changing regulatory environment to run such a partnering process.

Key value drivers such as permitting status, access to grid connection and offtake routes have been and remain moving targets for most projects. In the end, Bernd von Wieding and his bullish early partners sold their offshore wind business in August 2019 to RWE, which also recently completed the Arkona offshore wind farm in the German Baltic Sea together with Equinor, just some 150 kilometres from the FEW Baltic II project site. ■



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