

Investing in wind for a strong Eastern Europe

IN THIS REPORT

Gearing up for the Romanian
auction

Bulgaria clears licensing
roadblock

Poland back on the radar





Foreword

Poland, Romania and Bulgaria continue to pique the interest of wind developers as re-emerging markets. Until lately, Poland, Romania and Bulgaria had cut back on their onshore wind permit permissions.

Fortunately, onshore wind is the cheapest power source in places like Poland. This has contributed to a thaw in the freeze on permitting permissions, and in Romania's case, wind subsidies.

Most importantly, Eastern European consumers have stood up and taken note. Energy prices came to the fore as Russian invasion fears, and changes to energy supply patterns, have finally gripped the attention of the public.

Wind developers, investors and various utilities have placed their bets on the region with a swathe of new onshore wind projects. They have noted, too, that offshore is now on Bulgarian and Romanian national agendas. Developers are now making strategic choices, for example on revenue structure and transmission access, staying ahead of markets moving at what seems, to some, a slightly faster pace.

Project advisors observe the negative impacts of inflation on development, but report that the high appetite of investors persists despite rising risks in costs and curtailment.

Continuing their current role in shaping policy, wind developers appear poised and ready to play a forceful role in the Eastern European energy transition.

Contents



www.tamarindo.global
membership@tamarindo.global
+44 (0)20 7100 1616

3rd Floor, Tyndale House,
134 Cowley Road, Oxford, OX4 1JH

03 Foreword

05 Polish wind is back

08 Poland's first movers keep eyes on the prize

10 Bulgaria friendlier to wind

13 Romania readies for auctions

15 Offshore hopes face wartime threat

Chief Executive Officer: Adam Barber

Managing Director: Ilaria Valtimora

Analyst and Journalist: Cristina Brooks

Account Management & Business
Development: Pip Cull & Joe Tagg

Design: Rachael Moreland



Poland, Romania and Bulgaria have changed laws to attract more wind investors, and they are looking to replace fossil fuel power amid ever-more cost and greening pressure. But constraints hold back the region.

Wind developers could play the hero's role amid a rising sense of urgency around fossil fuel use in Eastern Europe: The question is, when is the energy transition going to get serious?

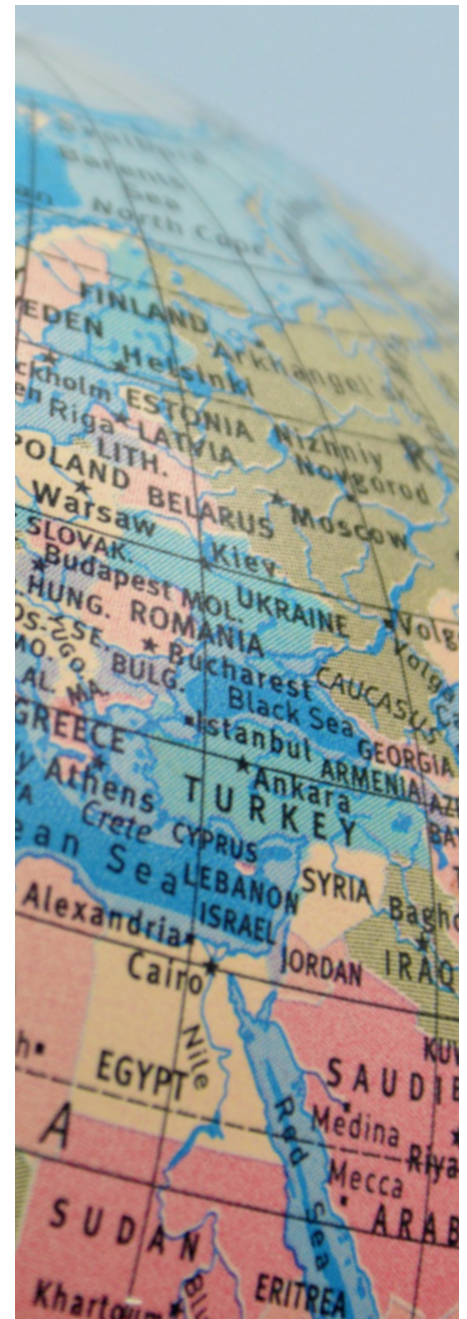
Poland and Bulgaria have low dependency on natural gas for power generation (9 and 6 per cent of the mix). However, they had to improvise when Russia suddenly switched off natural gas supplies to both countries after disputes over payment in Roubles. Poland had prepared for years, pledging in 2019 not to renew an existing Russian gas contract.

Not just gas, but also coal used for power is becoming more of an issue. Poland still uses coal for over 70 per cent of its power needs according to Polish NGO Instrat. Russia had supplied 20 per cent of Poland's coal before Poland banned Russian coal imports in the wake of war in Ukraine. But perversely, wartime supply crunches have boosted demand for coal power in Eastern Europe, for example in Poland and Bulgaria.

To date, Polish and Bulgarian onshore wind markets are yet to see an upside from bans of Russian fossil fuel imports to Eastern Europe. For example in Poland, IEA noted coal demand increased in 2022 and warned it must make "additional efforts" to reach its climate targets. Poland's natural gas supply has simply been sourced from friendlier exporters.

But the silver lining in the tragedy of the war in Ukraine is that public attitudes toward onshore wind are changing. Katarzyna Suchcicka, the Country Manager in Poland for Sweden-headquartered developer OX2, says, "During the last few years, we observed a systematic increase in social acceptance for RES investments."

"Russian aggression against Ukraine has changed a lot. As a society, we have realised that renewables ensure not only cheap, clean energy, but also the energy safety. At the same time, the myth of natural gas as a transition fuel between coal and renewable energy sources collapsed."



"During the last few years, we observed a systematic increase in social acceptance for RES investments."

Katarzyna Suchcicka
OX2

Instrat's Head of Energy & Climate Program Michał Smoleń, speaking at a conference in April, said, "Public surveys show that actually more than 80 per cent of (people) polled now support further development of onshore wind power, and other surveys have seen that two thirds of those polled support a quicker transition in the aftermath of the energy crisis and Russian war in Ukraine."

In Bulgaria, adding a link to a natural gas imports terminal and nuclear generation has been the immediate reaction to the energy cost crisis, but the country is also mulling new renewables. Bulgaria-based attorney, co-head of energy, at Austrian law firm Schoenherr Dimitar Kairakov says, "Bulgaria is highly dependent on natural gas from Russia... However, we see no direct impact on the plans for wind development, at least for the time being."



Polish wind is back

Wind power could replace what coal supplies in Poland's power mix by 2025, rising to 73 per cent from the 10 per cent it supplies today, finds management consulting firm McKinsey and Company.

In this vein, Poland launched its first offshore wind auctions and is on course to install its first Baltic Sea wind farms. It also ramped up offshore efforts as part of a group of countries promising jointly to build 19.6GW in the Baltic Sea by 2030, reducing regional dependency on Russian fossil fuel. Poland's offshore wind auctions alone will target 18GW of Polish offshore wind.

Onshore, Poland already has around 8GW of wind capacity across about 50 wind farms, and this figure is growing fast. The country added 1.5GW of that last year. The nation's second biggest wind farm, the 121MW Dębisk wind farm, began operations in February.

Ramping up further this year, the country upgraded its target to 51 per cent renewable power penetration, a scenario under which it expects onshore wind capacity to rise from 8GW to 20GW by 2040.

Observing new targets in Poland, Canadian IPP Northland Power Poland's counsel Patrycja Talarek-Dabrowska said, "We see Poland as a country which is at the moment in a huge energy transition. We know that this is a coal-based country, we know it will have to change, and we have now cues for that."

Germany-headquartered consultancy Rödl & Partner, with services in energy and tax law, has assisted with regional wind M&A including ready-to-build projects in share-deal structures. Piotr Mrowiec is an Associate Partner and Head of the Renewable Energy Practice at the Polish branch. He says Polish onshore wind projects have become “victims of their own success.”

Poland’s antique and constrained networks include 40-year-old overhead lines and refusals of network construction applications are known to cause wind project delays. The Ministry of Climate and Environment had seen a rising number of refusals for renewables seeking network connection, with up to 60–80 per cent of applications being rejected. In March 2022, there were 405 cases of disputed grid connection refusals, mostly for solar projects.

Even so, wind developer OX2 has been riding the country’s recent boom in PV projects with PV projects of its own. It has co-located PV and energy storage, for which it already operates two projects in Nordic countries, and has more hybrid projects on the radar for Poland.

OX2 finds hybrid systems using storage near PV and wind farms can get around network constraints, while allowing efficient combined use of their power. “In order to increase the opportunity to connect further renewable energy sources to the grid, investors are taking actions to offer participation in the costs of modernisation of existing, and expansion of the new, networks,” says OX2’s Suchcicka.

The issues with grid connection and capacity are still problematic, mostly impacting the PV farms which saw massive growth, but also new wind, says Mrowiec.

A draft law on grid interconnections should create a way to connect more renewable projects directly to offtakers, avoiding the need to connect to public networks, he says. “This is actually necessary to expand the opportunities to connect new wind farms. In plain terms, there is a problem with scarce resources (around) free connection capacity,” explains Mrowiec.

Polish onshore wind projects have become victims of their own success.



Smoleń says that the backlog of new projects waiting to be built could benefit from Poland's new partnership of TSOs and DSOs pledging to achieve up to 50 per cent renewable electricity by 2032. He also expects that, with wind curtailment already in Poland this year, and increasing saturation of renewables, hydrogen and storage markets could boom in Poland in the 2030s.

The European Commission in a recent country report noted that by 2032 Poland plans to invest over \$7 billion for modernising transmission networks so offshore wind power can reach industry in the south of Poland, and that the country is participating in the Baltic Harmony Link interconnection project, a high voltage cable estimated to be completed by 2028.

Rödl & Partner has seen investor clients securing the real estate for developing wind projects before trying to get network connections. "They want to be ready for the new capacities that will be there in two to five years, and not to be left behind," says Mrowiec, adding "[Investors] are massively developing new projects in Poland, hoping the new connection capacity will be there, as we think it will be. The grid operator is investing at the moment in new substations to have this improvement."

Wind in Poland is also hampered by strict rules for setbacks from housing based on wind-turbine height, the famous 10H rule, which for a time made developing wind "impossible." March saw Poland sign into law a long-awaited revision to the rule, the Act on Investments in Wind Farms and Certain Other Acts (Also known as the "Distance Act"), that loosened the 10H rule by giving local authorities the chance to grant developers exemptions letting them move closer to housing, up to 700 metres. Poland forecasts the change will enable 6-10GW of onshore by 2033.

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**Piotr Mrowiec
Rödl & Partner**



Mrowiec argues that, thanks to this change, now is the time to develop new wind farms. “The amendment with the liberalisation of the 10H rule is perhaps not in the scope that the majority would have wished in Poland, but it is what it is, and it is a milestone achieved after years,” says Mrowiec.

OX2 Country Manager Suchcicka is also optimistic about the Distance Act’s overall impact, but notes setbacks remain an obstacle, adding, “This is not enough change in relation to the possibilities and the potential offered by wind energy sector in Poland.”

Aiming to buoy popular support for wind farm development, the Distance Act also lets local citizens acquire and sell to the grid up to 10 per cent of power capacity from wind projects. However, citizens will have to pay up to €1,380 to gain 1 kW, which law firm Dentons predicted is likely to prevent citizens from participating.

Speaking at WindEurope’s conference in April, Polish Wind Energy Association Regulatory Director Piotr Czopek nevertheless noted the high level of support in polls for onshore wind. He said, “We don’t expect that it will be a problem that local communities need to agree to the onshore project.”

Poland’s first movers keep eyes on the prize

OX2 is rapidly expanding its wind development pipeline in Poland. It has five under-construction projects, four of which won support in state auctions. Two of the auction winners are set to start operations this year.

The developer already has a wind farm operating in the country. The wind farm, 21MW Żary, was sold to the asset manager for reinsurer Munich Re and a group of Munch Re insurance companies, MEAG, last year. OX2 also recently gained a permit for 14MW Grajewo wind farm, a turnkey project under development for Dutch independent fund manager DIF Capital Partners.

OX2’s Suchcicka says that international investors have a growing appetite for Polish wind. “Investors, both those who previously did not perceive Poland as a market for investments in renewable energy as well as those who knew there were opportunities in our country, are now visibly increasing their interest in investing in renewable energy sources in the Polish market.”





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Simeon Sarafow
wpd Europe

Another early mover in Poland’s fast-growing wind market is Germany-headquartered developer and operator wpd, with its seven owned-and-operated wind farms in the country.

Simeon Sarafow, Country Manager for Poland and Bulgaria at wpd Europe, says, “In general, yes, as the market is established, liquid and shows a high demand for onshore wind projects.” He thinks the Distance Act shows authorities know that onshore wind is cheaper than offshore.

Four of wpd’s projects, for which a local subsidiary won an auction in November 2018, are located near Poznan: 42.5MW Jarocin Kozmin, 10MW Krotoszyn, 5MW Jarocin Wschod and 4.8MW Slupca. They were financed with funding from the European Investment Bank and Germany’s Landesbank Baden-Wuerttemberg.

Continuing to expand its onshore portfolio in Poland, wpd is in the process of developing one 12MW wind project this year, and its operating portfolio includes full merchant exposure. “We have a mixture of projects with green certificates and PPAs, merchant projects and projects with successful auction participation and PPAs,” says Sarafow.

On the other hand, Sarafow explains that onshore wind investment is challenged by Poland’s country-specific electricity price cap, which caps possible revenue at an even lower level (€142.74) than the €180 cap required by the EU. “Current price cap regulation – lower prices and longer duration than proposed by the EU – is not beneficial,” he says.

This may be why, from a developer’s perspective, Russia’s intervention in Poland’s energy markets and the EU’s knee-jerk reaction of a bloc-wide cap is not immediately improving wind development prospects. Sarafow says, “We see rather only indirect effects of upheavals on the European market.”

Legal experts agree Poland's price cap deters fresh finance for wind, but not for long. "There is a decrease in the amount of money which is brought in via investment, but actually the price cap regulation will be temporary... We think we will have the cap until the end of this year, and then we will go back to the free market. Now, the energy prices are dropping, and this intervention is not needed anymore," says Mrowiec.

"Some of the investors looking at the Polish market are not too keen, but most are developing new projects. Inflation is a problem, as well, and you have to hedge it," Mrowiec says, adding, "From my personal perspective it would be better if we were in the Eurozone."

Piotr Nerwiński, a Banking and Finance Practice Partner with law firm Dentons warned in February that Poland's price caps had made wind project revenue assessments more difficult. At the same time, inflationary debt costs spurred interest in securing early construction-related equity from investors, such as IPPs.

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Rödl & Partner**

Bulgaria friendlier to wind

Bulgaria has been through years of failed government coalitions, corruption issues and changing stances on Russia versus the EU. The current government is an anti-corruption coalition with rotating Prime Ministers formed by the party of ex-Primier Boyko Borisov.

Plunged in political turmoil, Bulgaria had not been adding new wind capacity in 2021–2022. It has nationwide wind capacity of 707MW, meeting 4 per cent of power demand. Within the constraints of a large, EU-protected area for birds covering 34 per cent of its territory, Bulgaria's onshore wind may be poised for growth.

In a hopeful sign, Bulgaria was preparing to launch wind auctions once there was a coalition with a parliamentary majority, according to a May statement from WindEurope.

However, the country still has issues to work through. Grid development is a problem according to WindEurope. Local opposition is another hurdle: Last year developer Dobrotich Wind said a court had overturned a local city's attempt to put in place a moratorium on wind construction. Dobrotich Wind is a Bulgarian company of Australian renewables

developer CWP Global, which plans a 592MW wind farm in Varna region that could potentially double the nation's total installed onshore wind capacity.

Bulgaria needs cheaper energy than it has in its current energy mix. Although Bulgaria became the EU's second-largest electricity exporter during last year's crisis, the European Commission has warned that it couldn't continue to run a deficit by subsidising power for its local businesses, which had cost it \$3 billion. Think-tank Ember has said more wind capacity could slash electricity prices in the region by almost a third.

The decade-long quiet spell for Bulgarian wind may be at an end: wpd in October said that after starting development in 2007, it would build two wind parks near the villages of Sokolovo and Trigortsi in the northeast of Bulgaria with a combined capacity of 96MW.

Until 2015 Bulgarian wind farms had access to tariffs. One beneficiary is the country's largest wind farm, 156MW St Nikola, which began producing power in 2010. But since 2015, Bulgaria's onshore wind market has been operating subsidy-free.

Pexapark has noted that Bulgaria's lack of subsidies leaves a significant role to be played by bilateral PPAs. The company also said Bulgaria has "relatively low renewables penetration, which makes the risk of cannibalisation minimal for now." In addition, wind power prices in Bulgaria are relatively low at around €80/MWh, less than half of typical wind power prices regionally, according to Kapital Insights.

While fully merchant commercial-scale wind and other RES projects are currently being planned and developed, the Bulgarian government is mulling introducing new incentives, confirms Bulgaria-based legal expert Kairakov.

Kairakov notes that Bulgaria's draft Energy Strategy and National Energy and Climate Plans foresee new kinds of indirect wind investment incentives that are unlike the guaranteed prices and tariffs of the past.

Under draft laws, renewable energy developers would be freed from an obligation to make payments – amounting to 5 per cent of annual revenues – to the



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Schoenherr**



Electricity System Security Fund. He says that under this law, there will be other ways developers can optimise project finance, for example by laying a direct network connection line to a PPA offtaker site, for example an industrial park, in order to save on fees.

“There are a lot of opportunities to be explored in this field and we are positive that this will facilitate the revival of (Bulgaria’s) wind sector,” says Kairakov.

Further, more wind will be added under a unification of the Romanian Guarantees Of Origin scheme with the European System of Energy Certificates, bringing the chance to trade GOOs on the European market, says Kairakov.

Bulgaria’s national plan for electricity grid development from 2022–2031 sets a target for 4.9GW of renewables, and within that, an onshore wind target of 343MW. But the Bulgarian Wind Energy Association in the spring called for an increase of the target to 4.5GW to take into account existing onshore investment plans and EU renewable energy targets.

Not only are incentives back on the table, but red tape is being removed. Alexandra Doytchinova is co-head of M&A at Schoenherr. She explains the firm has historically worked on wind farm acquisitions, arranging corporate structures with a local holding company and a subsidiary–SPV for each turbine. She says, “As licensing would be required for each legal entity that runs a capacity exceeding 5MW, such corporate structures are technically avoiding licensing of a bigger park, as the single SPVs do not reach the relevant capacity threshold for licensing. This practice is widespread, seems known to the regulator and is being tolerated.”

“For the time being, the costs for the interconnection infrastructure are too high [for offshore] projects to be financially viable and this is the main constraint.”

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Schoenherr**

Early this year the capacity threshold triggering licensing for new renewable projects increased from 5MW to 20MW under a regulatory amendment, removing hurdles for new projects and investors, she says.

But the regulatory update means that certain “dormant” permitted projects that were never built from 2010 to 2012 may have permits that are expired or don’t benefit from the rules. “Thus, investors with interest in such ‘dormant’ project should be extremely cautious,” said Doytchinova.

Like in Poland, network issues in Bulgaria require attention. According to the European Institute Center for the Study of Democracy, wind developers must undergo a time-consuming procedure. This lack of adequate interconnection to neighbouring countries is also critical for offshore wind, Kairakov explains, “For the time being, the costs for the interconnection infrastructure are too high [for offshore] projects to be financially viable and this is the main constraint.”

Romania readies for auctions

Credit rating agency Fitch Solutions has predicted that Romania’s 2022 coal phase out law means it will decarbonise “faster” than markets such as Poland and Bulgaria, while new CfD auctions play a key role in adding renewable power capacity.

Last year Romania was gearing up to launch its first CfD auctions, seeking expressions of interest from wind and solar developers for an auction soliciting bids that would total 950MW.

Managing partner at the Romanian arm of Rödl & Partner Bogdan Fratila explains that the first CfD scheme is set to be scheduled in the second half of this year. A final version of participant guidelines for the auction is expected in the second quarter.

This 950MW solar and wind auction has its origins in Romania’s EU-led pandemic recovery scheme and it has European Bank for Reconstruction and Development backing. The first notifications of project approval have been sent, and by the end of May, all eligible projects were expected to be contracted.

Fratila explains that, despite the current lack of wind subsidies, wind investment activity has been ticking away behind the scenes in Romania. “Occasionally we have assisted our clients in asset deals concerning land prepared for investment and alternatively securing building rights and joint ventures with public or private entities,” he says. Romania has about 3GW of wind capacity, but it plans to target 5.3GW of wind and 5.1GW of solar by 2030.

It appears to have about 7GW of renewable projects in the pipeline that are likely to seek financing, for example PPAs for some existing renewable projects being refinanced, said the Netherlands' Rabobank last year.

"In the last few years, the biggest players in investment and development of wind parks were Enel Green Power, European Energy and EDP Renewables, to name a few," says Fratila.

Italian utility Enel Group had been a leading energy player in Romania since 2005, operating in power distribution and supply. Its local wind investor and developer Enel Green Power Romania had been active in Romanian wind since 2011, but in March agreed to sell its assets in Romania including 12 wind parks to Greek power utility PPC. The agreement to sell all the Romanian operations, expected by the third quarter of this year, should have a net debt impact of €1.7 billion.

Fratila suggests that Enel Group's exit could possibly be down to grid investment obligations that were taken on when entering the Romanian market, rather than to the growth potential of the Romanian market.

He also notes that two years ago, global asset manager Macquarie Infrastructure and Real Assets acquired the biggest wind park in Romania, the generously sized 600MW Fântânele-Cogealac. The deal saw the asset manager also take on networks and a power supply business from Czech conglomerate ČEZ Group.

Fratila says Romania has renewable growth potential as it is a net energy importer. What's more, wind investment in the country stands to benefit from upcoming EU-led initiatives: Romania's answer to the RePower EU plan to divest from Russian natural gas, as well as its national pandemic recovery plan, under which €855 million will be used for ending coal production while adding renewables and hydrogen.

In addition, €550 million should be available for renewable projects under the EU's Modernisation Fund, through which the EU supports 10 lower-income member states to meet the bloc's 2030 decarbonisation targets, and 5 per cent of Romania's counties, those that produce coal, will have access to €2.14 billion from the EU's Just Transition Fund to support their transition.



"The general issue is rather that at present, there are few large consumers and the distributors are very reticent to conclude PPAs."

**Bogdan Fratila
Rödl & Partner**

Nevertheless, price caps on power sales and distribution are likely to discourage PPAs until 2025. “There is no valid free market energy price reference,” Fratilla says, explaining the crippling nature of price caps.

He adds, “The general issue is rather that, at present, there are few large consumers and the distributors are very reticent to conclude PPAs.

“As such, investment income details predictions are rather volatile and access to financing is a more complicated process,” he says.

Offshore hopes face wartime threat

Not even offshore wind can wholly escape the spillover from the Russia’s ongoing war on Ukraine. Industry observers suggest that Romanian and Bulgarian offshore development plans in the Black Sea may be delayed by threats from floating naval mines.

Naval mines have been spotted by the Romanian navy in the water and on beaches. They also hamper Romania’s Black Sea fishing industry and exports of grain.

One of the Hague conventions on warfare forbids the use of unanchored automatic contact mines. However, neither Russia nor Ukraine are parties to that convention, writes Stockton Center for International Law professor Raul Pedrozo.

As one of Ukraine’s Black Sea neighbours, Bulgaria has 116GW of potential offshore wind capacity. At the end of last year, two draft wind offshore laws were introduced, but they did not pass through the voting process within Parliament, Kairakov says. But in late 2022, proposers decided to withdraw the acts, and it is unknown whether they will be re-proposed

In spite of the risks, before 2028 Bulgaria plans to install a 5MW floating wind turbine demonstrator in the Black Sea under the EU-supported Black Sea Floating Offshore Wind (BLOW) project scheme.

Offshore ambition is also evident in proposals for joint projects between Bulgaria and Romania. Late last year, newly formed developer Hooracán Energy proposed to build up to 3GW of offshore wind in the Bulgarian part of the Black Sea by sharing interconnection costs with Romania.

Offshore ambition is also evident in proposals for joint projects between Bulgaria and Romania.

Last September American infrastructure investor Global Infrastructure Partners acquired and gave a new name (Skyborn Renewables) to wpd's global offshore development pipeline of over 30GW, including offshore projects in Bulgaria and Romania. Through this unit, wpd had planned a 1.9GW offshore wind farm in Romania as well as a project off the Bulgarian coastal town of Balchik, emphasising that the ramp up of offshore in the two countries is linked.

Romania is also preparing for a leap forward in the offshore wind sector, but as in Bulgaria, not very fast, and it is unknown whether prospects could be delayed by war. Romania is estimated to have 76GW of offshore wind potential, of which 22GW is fixed and 54GW is floating.

Romania signed a pledge alongside G8 countries, including the US and Japan, to ramp up offshore wind at the COP27 climate conference last year, via the so-called Offshore Wind Alliance.

Under the Danish-led initiative, Romania is required to set national offshore wind targets and strategies and execute them through its Paris Agreement-related plans. The venture's call-to-action document would see the publishing of its offshore commitment, explains Fratilla. Time will tell whether these lofty offshore wind plans are followed through.

While both offshore and onshore growth in these countries faces a multitude of challenges due to energy price rises and political instability, a green light for the first auctions in the Black Sea would be seen as the latest promising sign for the energy transition in a region the world has its eyes on.

Get in touch

hello@tamarindo.global

+44 (0)20 7100 1616

tamarindo.global