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Live longer and prosper offshore, say financiers

Offshore wind developers must place a greater focus on what happens to projects at the end of their lifetimes when looking to secure finance. **p2**

Poland to pull trigger on 2.5GW onshore tender

The Polish government is to fire the starting gun on an up to 2.5GW onshore wind tender later this year. **p3**

THE INTERVIEW reNEWS

Today, Acciona Energy chief executive Rafael Mateo. **p4**



Digital diet for offshore O&M

Data-crunching is at the heart of flagship European Union-funded research project aiming to take the sting out of offshore wind farm maintenance bills. **p5**

Teamwork essential for greening of grid

Wind industry players and transmission system operators must collaborate more effectively to ensure electricity grids can handle an upcoming surge in new renewables capacity, WindEurope 2019 has heard.

Key sector figures told delegates on day 2 that time is running out to organise sufficiently to deliver on 2030 targets.

"Ten years is tomorrow when you need to innovate around (network) technology," said GE Grid Solutions chief technology officer Vera Silva.

TSOs need to co-operate internally and with distribution

system operators to drive infrastructure development and utilise existing assets more efficiently, she added.

Associations including WindEurope and politicians also have a big role to play to encourage and facilitate important conversations. "If we have the right business case the technology will follow," Silva said.

"There is no showstopper today in terms of what technology can do to achieve a very high penetration of renewables."

Mark Foley, chief executive of Irish transmission system operator Eirgrid, said TSOs

and DSOs need to "work hand in hand" to develop technological solutions and "not compete at the interface".

Additionally, he said it is crucial for industry to communicate convincingly the importance of decarbonisation to the general public. "We have to win the hearts and minds of the people," Foley said.

"They need to see a connection between plugging in an electric vehicle and how that actually manifests in terms of wind power and solar power on the system to make that decarbonised world work for them."

Slice and dice solution for giant blades

Splitting blades into two pieces is emerging as a potentially viable solution to overcome logistical challenges posed by the rise of giant turbines.

The process of so-called blade segmentation would allow companies to save on transport costs while reducing the need for expensive factory expansions, LM Wind Power senior director John Korsgaard told WindEurope 2019. A study by the company

in the 1990s involving a 60-metre segmented blade showed production costs would rise by 15% to 20% but logistical savings would only be 5%, he said.

However, that situation is now changing as turbines get bigger.

Korsgaard added there is no limit to how long blades could become.

"It's not a technical challenge. It's more a financial challenge."



WALKING THE WALK: blade production Photo: LM Wind Power

TRENDING ON reNEWS.BIZ LIVE@ WE 2019

Consortium to search for EU wind health and safety harmony

The European Commission has chosen a consortium led by Eclareon, The Renewables Consulting Group and WindEurope to explore health, safety and environment best practice. The 'wind harmony' study will examine alignment of HSE standards from construction, through O&M to decommissioning, covering both onshore and offshore sites.

UK insurer offers renewables risk tool

UK insurer CLS Risk Solutions has launched a new product at WindEurope 2019 that will protect against interruptions to renewable energy construction projects caused by third-party interventions such as judicial reviews.

Siemens Gamesa unveils 5MW onshore newbie

Siemens Gamesa has launched a new 5MW onshore turbine platform and is offering two variants to the market. The 5.X series will initially be available as 5.8MW units with a 155-metre or 170-metre rotor.

Wind council online insights

The Global Wind Energy Council has launched a new market intelligence platform offering online insights and analysis of the global wind industry to its members. Information includes wind energy statistics, market outlooks, country profiles and policy updates.

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Day 3 highlights
A just cause

European policymakers set out how the unstoppable clean energy revolution could deliver opportunities for all.

Auditorium 1, 09.00-10.15

Whizz kids

Schoolchildren aged 10-15 will build and test model turbines in a small wind tunnel with the best team winning a prize.

Hall 1, 09.00-17.00

Poster art

A chance to view posters, commemorate this year's award winners and meet with all poster presenters to discuss findings.

Luxua-Level 3, 10.00-10.45

Europe's next chapter

Get insight on market developments in Germany, France, Poland, Italy and Lithuania as EU member states work to adopt National Energy and Climate Plans.

Luxua 1, 10.45-12.00

Tomorrow's world

A look at opportunities arising from innovations driving the wind industry towards higher levels of connectivity and autonomous operations.

Auditorium 1, 15.00-16.15

Live longer and prosper offshore, say financiers

Offshore wind developers must place a greater focus on what happens to projects at the end of their lifetimes, WindEurope 2019 has heard.

Financiers are increasingly looking at the latter stages of asset life to get more bang for their buck as subsidy support fades, according to Green Investment Group head of Europe Edward Northam.

"It is no longer all about capital costs upfront and building-stage operations and maintenance," he said. "It's increasingly about what happens at the back end, evaluating things like repowering and other alternatives."

Several large-scale offshore wind projects are approaching the end of their lives with the rate of decommissionings set to increase. Repowering is, however, emerging as a realistic alternative thanks to falling offshore development

costs. Northam warned that pressure on project revenue lines would intensify as governments move from offering subsidies towards auction-based systems and ultimately to a zero-subsidy world. Extending the life of projects could help offset that pressure, he said.

Additionally, developers

will have to accept power purchase agreements. In 2017, for example, companies around the world purchased over 460 terawatt-hours of renewable energy.

"We see that demand growing. So increasingly a PPA strategy will be instrumental and in fact integral in getting projects financed," he said.

Subsidy-free wind world needs new PPA paradigm

A larger pool of off-takers willing to sign long-term power purchase agreements is needed before subsidy-free wind development becomes the global norm, delegates heard on day 2.

"At Google we now consume eight terawatt-hours of renewable energy a year but Facebook, Google, Apple and Amazon (alone) can't drive the transition," said the search company's energy

procurement lead Marc Oman. Vattenfall head of portfolio and transactions Danielle Lane said the wind industry needs to look to "innovative solutions in all markets" to lock guaranteed power prices into long-term deals.

"There has got to be a broader system for PPAs that can help developers access different portions of the market like domestic consumers," she said.

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Poland to pull the trigger on 2.5GW onshore tender this year

The Polish government is to fire the starting gun on an up to 2.5GW onshore wind tender later this year.

Janusz Gajowiecki, chief executive of national wind energy association PWEA, said the capacity will make the country "one of the largest building sites for onshore wind in Europe".

Projects with final building permits and grid connection agreements will be eligible to bid in the auction, which will offer support for 15 years.

"Around 1GW secured prices of €47 per megawatt hour at the last auction in November, making wind the most competitive form of power generation in the country," Gajowiecki said on day 2 of WindEurope 2019.

Meanwhile, PWEA offshore lead Pawel Przybylski (pictured) said development in the country's Baltic Sea acreage will soon hit top gear.

"The Energy Ministry

is working on an act that creates a subsidy system and regulatory framework for offshore wind and we expect to see it soon."

The government is targeting around 4.6GW of offshore capacity by 2030 and the first projects are expected to be commissioned between 2022 and 2025.

A partnership between Equinor and Polenergia has some of the most advanced plans for development, Przybylski said.

Equinor's new energy solutions division vice president of Pal Eitrheim told reNEWS on the sidelines of the event:



"We have taken an early position in the market and it is an important part of our future plans for offshore development in Europe."

Argentina coming back for more

Argentina is working on a new renewable energy tender, the fourth undertaken by the Latin American nation since 2017, a senior official told delegates in Bilbao.

"We are combining the transmission side and the generation side together in a new round that will hopefully come soon," said Undersecretary for

Renewable Energy Sebastian Kind. Specifics of the so-called RenovAr process including precise timing and the amount of support on offer have yet to be detailed.

Argentina recently launched its third renewables tender offering 400MW of capacity for small projects up to 10MW in size. Bids are due by the end of May, Kind said.

German check-up for GE's Cypress

GE Renewable Energy has contracted the Fraunhofer Institute for Wind Energy Systems in Germany to test the drive train of its new 5MW Cypress onshore wind turbine platform.

Tests designed to validate the capability of the technology in everyday operating environments, as well as extreme conditions,

will start in August and last for one year.

GE has meanwhile opened a new operations centre in Barcelona capable of monitoring more than 2000 turbines. The base brings the total number of onshore and offshore wind, solar and energy storage units monitored around the world to more than 15,000.

Romania eyes CfD to fuel 1.3GW wind surge

Romania is considering adding an extra 1.3GW of wind capacity in the next decade, WindEurope 2019 has heard.

Energy Authority vice president Zoltan Nagy-Bege said the country's energy minister is mulling a proposal for new projects to

be financed via a Contracts for Difference-style support mechanism.

A further 1GW of solar and 750MW of hydro are also included in the proposal, he added.

Romania is currently aiming to meet 28% of its energy consumption from renewable

sources by 2030 with an interim target of 24% by 2020.

Nagy-Bege said the longer-term goal is "not very challenging" given the potential renewables boost. "If we are proposing another 3GW by the end of 2030 I think our target... will be much closer to or even higher than 32%."

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THE INTERVIEW reNEWS



Setting the scene at WindEurope 2019, senior industry figures talk to reNEWS about the vital issues shaping the sector. Today it's the turn of Acciona Energy chief executive Rafael Mateo (left)

Q How do you see the prospects for the Spanish onshore wind industry for both the short and long term?

A Spain is a country with several areas of very good resource and a clear need for clean, sustainable, competitive power. Given the current signs from regulators, we expect a promising short-to-medium term market, which will be very much dependent on the deployment of current plans. Furthermore, taking into account Spanish renewables targets, we foresee the market will grow in the long term too, provided adequate regulation is in place.

Q What are the major challenges facing the Spanish onshore sector development and how can these be overcome?

A The most necessary thing for the correct deployment of wind power is clear, adequate and stable regulation that helps the sector understand how to develop its activity in Spain and provides investors with the necessary trust. It is also very important to guarantee connection capacity for all projects awarded and reinforcement of the grid in order to absorb all new capacity. Ensuring all regional administrations are

aligned and have enough resources to guarantee development in an adequate timeframe is also vital.

Q What measures can policymakers and governments introduce to support the Spanish wind sector over the coming years?

A Policymakers need to establish clear goals and obligations to guarantee the sustainability of our energy system, including electrification targets for transport, buildings and industry. European targets should demand a higher percentage of renewables consumption for all players in the market. That would help not just the wind industry but also the sustainable development of our country. A clear sign could be urging all public energy consumption to have a renewable origin. Beyond that, a clear roadmap for renewables capacity installation together with well-organised and timely tenders can provide the right clarity for power plant investments. Other tools like hybrid tenders and repowering can also play a role. Hybrid tenders are especially interesting in terms of grid resource optimisation benefiting the whole system. Mechanisms such as a carbon tax could support renewable power and we believe the first draft of

the Spanish government's Strategic Framework for Energy and Climate contains good ideas that could help the sector move forward steadily.

Q Has the sector convinced policymakers/governments and persuaded public opinion that it can be a big part of the future energy mix?

A Thanks to the good resource and advances in technology, onshore wind is part of the best solution to help Spain meet its climate targets while providing very competitive electricity. However, we still have a long way ahead until our electricity mix reaches the optimal point of economic competitiveness, security of supply and sustainability. Although some policymakers and some sections of public opinion understand electrification combined with renewables is the best option to move forward, we still need to work with all those unconvinced in order to debunk some of the myths. For example, some people still think we are expensive even when we are the cheapest source of power in the world today. We will keep providing facts and working hard with policymakers. We are convinced more will share our vision everyday.

Photo: Acciona Energy



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Digital diet for offshore O&M

Data-crunching at heart of research project aiming to take the sting out of maintenance bills, writes Amir Garanovic

renews.biz



DATE WITH ROMEO: Iberdrola's 350MW Wikinger wind farm in the German Baltic Sea

Photo: Iberdrola

A flagship European Union-funded research project led by Iberdrola of Spain is on track to develop next-generation systems for offshore wind operations and maintenance by 2022.

The 'Reliable OM decision tools and strategies for high lcoE reduction on Offshore wind' (Romeo) project is making "good progress" two years into a five-year programme, said Iberdrola head of innovation Cesar Yanes.

The aim is to drive down offshore O&M costs through better planning of

maintenance and reducing the number of inspections required on substructures and key wind farm components.

The 12-member project consortium is developing "third generation" condition monitoring systems, models and tools for early fault detection and diagnosis of components.

"Physical models have already been developed for critical failures on the turbine gearbox, converter, generator, blade bearing and main transformer and the outputs will feed data driven models," said Yanes.

Enhancing the real-time condition monitoring is also expected to maximise the lifetime of the components while improving reliability, he added.

The €16m project will culminate in testing of the models and tools developed by the Romeo team at three offshore wind farms in European waters. Work

is scheduled to kick off in mid-2020 at two Iberdrola-owned projects, the 714MW East Anglia 1 off the UK and 350MW Wikinger in the Baltic Sea off Germany. The technology will also be put to the test at the EDF's 62MW Teesside wind farm in the UK North Sea.

The trials will evaluate the Romeo technology in the field before it is rolled out to the wider offshore wind industry.

A key element of the project backed by a €10m Horizon 2020 grant is the design and implementation of a Cloud-based Internet of Things platform to process the large volume of data generated by the condition monitoring systems.

Indian IT outfit Minsait is playing a leading role in the design of the real-time data integration platform, which will also be fed by advanced predictive and performance monitoring analytics.

Other consortium partners include IBM Research Zurich,

Uptime, Bachmann, Adwen, Ramboll and Siemens Gamesa. Yanes said: "Considering the contribution of O&M costs to the cost of energy, any reductions will help to make offshore wind even more competitive."

He will present an update on Romeo during the 'Digitalisation: creating value in O&M' conference session at WindEurope on Thursday. ■

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