DAY FOUR

EWEA 2015

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Indian offshore tenders 'expected by 2019'

Shruti Shukla, GWEC's director of policy and global projects, speaking at EWEA 2015 yesterday

BERND RADOWITZ

The Global Wind Energy Council (GWEC) says India is likely to hold its first offshore tender by 2019, but remains cautious about the country's potential and urges the government not to rush into the expensive technology.

"The size of that auction, we're still not sure what that will be like," GWEC's director of policy and global projects, Shruti Shukla, told *Recharge* during a panel on business in non-European markets at EWEA 2015 yesterday.

"We're trying our best to temper down the desire for a quick result in the offshore sector."

GWEC is leading the EU-funded Facilitating Offshore Wind in India (Fowind) consortium that is assessing the wind resource off the country's 7,500km coastline, focusing on the western state of Gujarat and Tamil Nadu in the southeast.

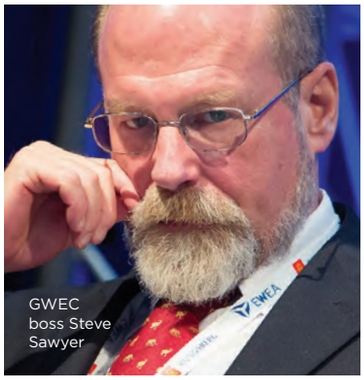
Fowind is studying the grid, port and supply-chain infrastructure for offshore in the subcontinent and is undertaking lidar-based assessment; it has identified eight zones off those states that are under review by the government in New Delhi.

GWEC secretary-general Steve Sawyer warned India not to repeat mistakes made in Europe and China — such as overly optimistic volume projections, escalating costs, equipment failures, steep learning curves and a slowdown of development before offshore projects were eventually ramped up again as costs were brought down.

"I'm afraid that if they go through that early hyper-enthusiastic cycle, then it will kill the technology's potential in India, simply because they don't have the money," Sawyer emphasised.

"The Europeans can afford to do a ridiculous policy boom-bust kind of thing like that; the Chinese can to a certain extent. India really can't afford to."

India first needs to invest heavily in its port, airport and rail infrastructure, and dramatically upgrade its transmission and distribution system before offshore makes sense, Sawyer stressed.



GWEC boss Steve Sawyer

"Having solved all those problems, a couple of hundred gigawatts of offshore in India — no problem — but don't ask me by when," he said.

In September, the government of Prime Minister Narendra Modi — which is due to rule until 2019 — approved the country's offshore policy, authorising the National Institute of Wind Energy to allocate development blocks and steer R&D activities.

Tulsi Tanti, chairman of Indian turbine champion Suzlon, has said his company is carrying out a feasibility study off Gujarat, where it has identified more than 1GW of potential.

Last year, the government signed a memorandum of understanding over a first 100MW demonstration project off Gujarat, led by the Ministry of New and Renewable Energy and including the Gujarat Power Corporation. R

Photography | Jason Bickley/EWEA

High costs for TSOs as record 32.6GW of wind hits German grid

BERND RADOWITZ

Onshore and offshore wind fed an all-time record of 32.6GW into the German grid on Wednesday, prompting transmission system operators (TSOs) to enact costly measures to stabilise the power grid, says TenneT, the TSO responsible for North Sea offshore wind farms and the adjoining region.

"To be able to feed in and transport rising amounts of electricity from wind and other renewable energies without disruption, the build-up of the power grid in Germany is indispensable," says TenneT chairman Urban Keussen.

"If the grid expansion is delayed, consumers and the economy will continue to carry high costs for emergency measures and the risks for the security of supply will rise."

The construction of several high-voltage direc-current transmission lines to bring power from Germany's windy north to power-thirsty industrial centres in the south has been delayed by local protests and political squabbling.

As more nuclear capacity gets switched off in the south in the wake of Germany's *Energiewende* — its transition from nuclear to renewable energy — tensions in the grid will only increase, TenneT says.

Since 9 November, heavy winds have led to TSOs calling up 2.2GW of Germany's winter reserve capacity, with 300MW of wind capacity curtailed to guarantee the stability of Germany's high-voltage grid.

Such measures will cost taxpayers some €500m this year, the TSO adds.

The highest amount of offshore wind supplied from the North Sea since 9 November was about 2.6GW.

Giles Dickson reveals the winning city

And the winner is... Amsterdam

EWEA 2017 will take place in Amsterdam, it was announced last night.

In a vote by delegates at EWEA 2015, 724 votes were cast for the Dutch capital, versus 630 for Brussels.

"Amsterdam will run a great event," EWEA chief executive Giles Dickson told *Recharge*. "The Netherlands has great ambitions for both onshore and offshore wind. They are in the process of launching seven tenders for 500MW of offshore wind. They have their EU presidency just around the corner and they will use that to push offshore wind for the whole of the North Sea."

He added that EWEA was neutral about which city would host the event. "The members of the EWEA staff did not vote," said Dickson.

Nordex will continue to avoid China

BERND RADOWITZ

German OEM Nordex will not try to sell turbines in China, even after its acquisition of Acciona Windpower, chief executive Lars Bondo Krogsgaard told *Recharge* yesterday.

"No, we don't want to waste our time trying to sell turbines in China," he said. "Prices are low, it's an intransparent market where volumes go to the Chinese."

Krogsgaard added that he isn't concerned by Chinese manufacturers such as Envision pushing into the European market.

"Competition is fine. If they want to sell wind turbines in Europe, have fun!" he said, adding: "We're not seeing too much competition on that front."

While the quality of Chinese turbines is improving, having to deal with Europe's various different electricity systems, markets and regulatory environments makes it a very tough market, he said, pointing out that competition is already cut-throat, with high pressure on terms and prices.

'Good progress' on *Energiewende*

BERND RADOWITZ

Germany is making "good progress" with its energy transition, according to energy minister Sigmar Gabriel.

The government's annual *Energiewende* monitoring report, which was approved by the German cabinet this week, found that renewables accounted for more than 30% of electricity supply in the first half of 2015, amid sinking power consumption, with greenhouse gas emissions falling 4.3% last year.

Electricity prices have fallen this year for the first time in ten years, the report points out.

Photograph | Tim Buelens/EWEA

Fossil fuels 'get more EU cash than renewables'

CHRISTOPHER HOPSON

Photograph | DPA/PA

The EU is providing nearly three times more development funds for fossil fuels than it does for renewables and energy-efficiency schemes, according to a report from CEE Bankwatch Network, an international consortium of environmental and development organisations across Central and Eastern Europe that monitor financial institutions in the region.

The report finds that out of a total of €9bn provided by the EU to finance energy projects among its eastern and southern countries from 2007 to 2014, only €1.5bn was granted for renewables and energy efficiency projects, while over €4.2bn was given to hydrocarbon-based schemes.

The European Investment Bank (EIB) had the most pronounced difference in funding between the two sectors, providing €3.2bn into 17 fossil-fuel schemes, with only €780m for renewables and energy-efficiency schemes.

Klara Sikorova, senior researcher at Bankwatch, says that Europe must radically change course if its rhetoric on sustainable-energy investments is to become a reality.

"EU lenders talk of leading Europe's neighbourhood to the next level when it comes to renewable energy, but their track record says the opposite."

The report says that hydrocarbon-rich nations also received disproportionately less financing for exploiting renewables.

The Bankwatch analysis concentrates on the financing agreements between five leading European institutions — the EIB, the European Bank for Reconstruction and Development, the Neighbourhood Investment Facility, Inogate and the European Atomic Energy Community.

The port at Lowestoft, the most easterly town in the UK, which has had its own wind turbine — nicknamed Gulliver — since 2004

Photograph | Wind Energy Network

EA1 hub chosen in 30-year deal

CHRISTOPHER HOPSON

ScottishPower Renewables has struck a 30-year, €35.7m deal to use the Port of Lowestoft as a construction and operations hub for the 714MW East Anglia 1 (EA1) offshore wind farm.

The developer has agreed with Associated British Ports (ABP) to use the town in eastern England as its management base during construction and as its main O&M hub.

ScottishPower Renewables will establish the new operations facility and carry out upgrades and modifications to the port and surrounding harbour area.

The €35.7m includes the cost of the upgrades and O&M facility, as well as the agreement with ABP to be based at its port.

It says about 100 people will be employed full-time at the port when EA1 is completed, with thousands of contractors and supply-chain operators working from the site every year.

"Today's announcement will help to make the East Anglia region the leading destination for investment and job creation in the UK's offshore wind-power industry," says Jonathan Cole, the developer's managing director of offshore wind.

"Off the coast of Norfolk and Suffolk, billions of pounds of investments are being made and tens of thousands of job opportunities are being created.

"In Lowestoft, we will manage construction activities and operate and maintain our EA1 project for at least the next three decades. This will support highly skilled, long-term jobs, both directly and across our supply chain.

"Every year during the construction phase and operations phase of the project, millions of pounds will be injected into the local economy.

"Our East Anglia 3 planning submission also highlights our continued commitment to the region and the tremendous potential in the east of England to develop further large offshore wind projects."

Wind tipped to win big in Mexico auction

BRIAN PUBLICOVER

Mexico may auction up to 2.5GW of renewables capacity in its first clean-energy tender this month, potentially presenting big opportunities for wind investors.

The auction — priced in US dollars to lure overseas developers — may finally provide the certainty that prospective investors have been seeking.

"We expect probably 2.5GW. I would say most of that will come from wind," Joan Aymami — vice-president of international business at US engineering consultancy AWS TruePower — said at the EWEA 2015 Doing Business in Non-European Markets session.

"The country is just finalising the electrical reforms that will provide visibility for long-term investors, developers and OEMs. The projects in the auctions will be obviously long-term and will provide a stable financial picture for 15-20 years."

Mexico began revamping its energy markets in 2013 to attract greater investment.

The Global Wind Energy Council expects 9.5GW of wind to be installed in the country by 2018, up from 2.6GW in 2014, with development likely to be heavily concentrated in the states of Oaxaca, Tamaulipas and Baja California.

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€4.2m — the average cost of a turbine fire

DARIUS SNIECKUS

Firefighters attend a turbine blaze in eastern Germany

Photograph | DPA/PA

Turbine fires cost the wind industry $225m (€210m) a year, renewables underwriter GCube reports.

Its *Towering Inferno* study says that despite the wider use of fire-suppression systems, turbine fires typically result in the "total or near-total" loss of a multi-million-dollar asset. It estimates that a turbine fire and its knock-on downtime will cost a project owner an average of €4.2m.

Drawing on far-ranging claims data and in-field experience, *Towering Inferno* finds that while turbine fires remain a relative rarity — the global fleet of 300,000 machines suffers about 50 each year — they can lead to a "disproportionate amount of negative news coverage".

"While the vast majority of renewable-energy losses escape the attention of the international media, it seems that, every few weeks, a turbine fire makes the headlines," says GCube head of business development Jatin Sharma.

"Faced with this increased scrutiny and the long-term financial impact of a total turbine loss, we need to address the causes and consequences of turbine fire and, as a community, recognise that it affects each company in the industry rather than 'affecting our competitors'."

Causes of fires range from component malfunction to lightning strikes to human error, according to extensive interviews with claims specialist Renewable Energy Loss Adjusters and fire-suppression expert Firetrace International.

Forest fires and bushfires sparked by burning debris from turbine fires in high-risk locations such as South Australia and California are an increasing concern, fuelling fears of similar occurrences in forested regions of North America and Europe.

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Fred Olsen unveils far-offshore O&M base

DARIUS SNIECKUS

Fred Olsen Windcarrier has unveiled its concept for an offshore service base to house O&M crews working on far-from-shore wind projects.

The Windbase, which would comprise an accommodation module, a full service hub and heliport fixed to the seabed with mono bucket foundations, is designed to bring down O&M costs for the next generation of offshore wind farms.

"We've seen floating solutions and even man-made islands proposed for projects located far from shore," says Windbase project director David Matthews. "E.ON's Amrumbank offshore wind farm will use the island of Helgoland to launch its island-based service concept, which will no doubt be a great success and one that [we] will replicate across Europe.

"But new concepts must offer business-case certainty and use established technologies with an experienced supplier in offshore marine contracting."

Windbase is designed as a "flexible solution" with a mix of facilities and capabilities that can be delivered "individually or in combination with other offshore marine assets".

Matthews says: "The beauty of this new approach lies in the fact that it offers a through-life capability, deployed very early in the construction phase for installation and commissioning, and remaining onsite until the project is repowered or decommissioned."

An investment decision on the first full-scale version is expected in the first half of 2016.

A rendering of the Fred Olsen Windbase

Photograph | Fred Olsen Windcarrier


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Moving into offshore servicing

BERND RADOWITZ

Deutsche Windtechnik is gearing up to start servicing offshore turbines, while expanding onshore activities outside its German home market.

Offshore "is a very good market", says managing director Lars Behrends, who is responsible for international business at the independent service provider.

"Historically, we get 15%, 20% of an onshore wind servicing market," he tells *Recharge*, but such shares in offshore would be "more than we expect".

Behrends says Deutsche Windtechnik already services marine wind infrastructure such as monopile foundations and transformer stations, but it will not begin servicing offshore turbines before 2017.

Vattenfall's 288MW DanTysk and EnBW's 288MW Baltic 2 will probably be among the first larger offshore developments that Deutsche Windtechnik services.

Lars Behrends at the Deutsche Windtechnik stand

Photograph | Jason Bickley/EWEA

The Bremen-based company's main focus is on the German market, where it services about 1,800 of the 2,600 turbines it maintains and repairs across Europe.

However, it has been expanding its international onshore footprint: by the end of this year, it will have 122 employees outside its domestic market and is looking at boosting the proportion of non-German revenue from 12% now to 30% over the next two or three years.

It is already present in the UK, Spain, Poland, the Netherlands and Denmark, and will soon establish a subsidiary in France. R

ZephIR lidar gets DNV GL seal of approval

DARIUS SNIECKUS

International certification body DNV GL has given its seal of approval to ZephIR's lidar technology, making it the "go-to" standard for wind measurement.

The companies have signed a framework agreement anointing the UK company's ZephIR 300 as "bankable" for finance-grade wind-speed and energy assessments at sites where there is no meteorological mast. ZephIR's lidar is the first commercial wind system to receive accreditation at this level.

ZephIR 300 measures wind characteristics onshore and on fixed or floating offshore platforms from ten to 200 metres above the installed position for wind regime and quality studies. R

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Conference sessions: Top picks

09.30-11.00
Innovative design and validation tools
Room: Montmartre

LiDARs replacing meteorological masts
Room: Montparnasse

Financing wind under changing support schemes: Key takes from auction systems
Room: Belleville

12.00-13.30
Loads and fatigue
Room: Montmartre

The O&M impact on LCOE — How to get costs down?
Room: Montparnasse

Breakthrough session
Room: Belleville

13.30-14.15 Visionary debates
Lunch area

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ACKNOWLEDGEMENTS

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We look forward to seeing you at one of our future events in 2016.

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Ø 141 m
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Ø 126 m
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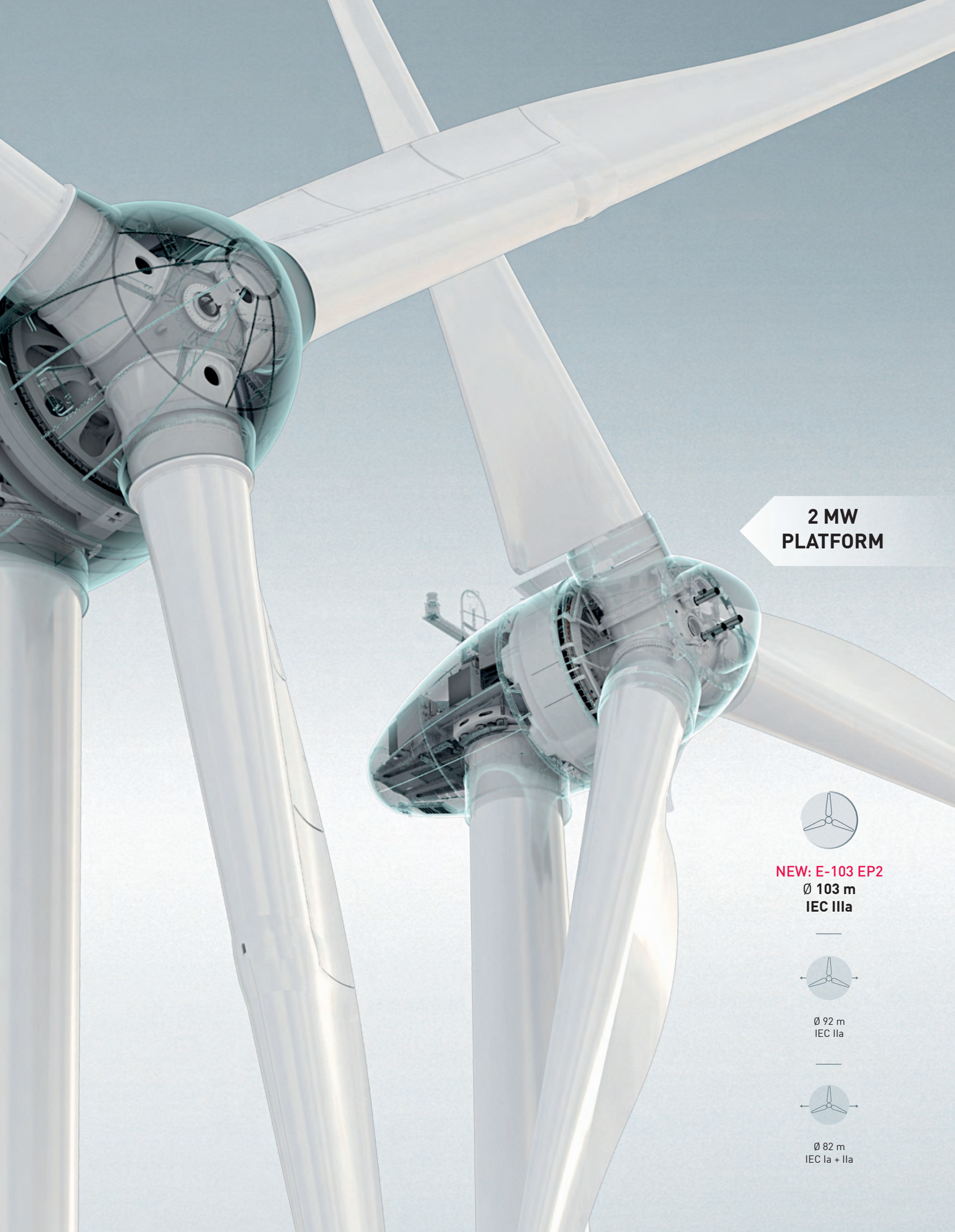

2 MW PLATFORM

NEW: E-103 EP2
Ø 103 m
IEC IIIa

Ø 92 m
IEC IIa

Ø 82 m
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Inox wind turbines in India

Inox gears up for India growth

ANDREW LEE

Indian OEM Inox Wind has opened the doors of its 800MW integrated factory in Madhya Pradesh state as competition intensifies among turbine makers chasing a slice of India's red-hot renewables market.

The new plant — said to be among Asia's biggest — doubles the company's annual production capacity to 1.6GW as it pursues ambitious growth targets following a €105m initial public offering on the Mumbai stock exchange this year.

The factory can produce 400 rotor blade sets annually, and will be ramped up to assemble 400 nacelles and 300 towers. Inox says it will enable future production of 113-metre blades.

Inox Wind makes a small range of 2MW turbines featuring control technology from US supplier AMSC.

It has a customer base that includes Tata Power, Continuum Wind and Ostro Energy, and had an order book of 1.2GW at the end of 2014.

It also offers a full range of turnkey services to developers, from site assessment and acquisition to long-term O&M.

In March, director Devansh Jain told *Recharge* his company could be"the last man standing" in an Indian market that could support four or five major turbine OEMs.

A subsidiary of the chemicals-to-multiplex cinemas conglomerate Inox Group, Inox Wind is a relative latecomer to the market, only becoming active in 2010.

India is the target of significant investment by local and international players as it pursues targets of 60GW of wind and 100GW of solar by 2022.

Foreign wind majors such as Gamesa, Acciona and most recently Vestas have announced production initiatives as they compete for business there with locals Inox and Suzlon.

Inox Wind chief executive Kailash Tarachandani says: "With the government's renewed thrust on the development of renewable energy, along with a supportive regulatory framework, India's wind market is expected to be one of the world's fastest growing. The enhanced capacity will enable the company to maintain its position as the leading manufacturer of wind turbine generators in India."

> "India's wind market is expected to one of the world's fastest growing

Photograph | Inox Wind

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Hans Bünting at the launch of the 90MW Zuidwester wind farm in the northern Netherlands this month

Photograph | RWE

Innogy boss confident on green growth

LEIGH COLLINS

It will be "quite easy" for RWE to rapidly build up its renewables portfolio, despite its financial difficulties, Hans Bünting, chief executive of RWE Innogy, the German utility's renewables arm, tells *Recharge*.

RWE has suffered financially in recent years due to an overreliance on fossil-fuel power plants — which often have to be switched off when a lot of renewable energy comes onto the network — and low wholesale prices, also due to the rise of wind and solar.

On top of this, the company has had to set aside billions of euros to cover the government-mandated decommissioning of its nuclear plants, leaving it with little spare cash for new investments.

Nevertheless, Bünting is "as confident as we can be" that Innogy will be able to make the investments in renewables that it needs to revive the business.

"RWE has declared three core growth areas for the future," he explains. "It's the downstream business, where we look at the innovative products — smart homes and various kinds of things that are new; the next one is grid, because this is a very stable, regulated business; and the third growth pillar will be renewables.

"So we [Innogy] are core to RWE, especially if you take a look at the fossil-fuels generation fleet, which will, over the coming years, get smaller and smaller because assets will be decommissioned, and we won't make new investments into fossil fuels in the coming years, for sure, unless you have a genuine capacity market."

> We [Innogy] are core to RWE. The fossil-fuels generation fleet will get smaller and smaller

The inherent flexibility of renewables will make the required investments possible, he explains.

"You can build and invest 100%, you can build and invest a share of 51% and take a minority partner on board, you can divest 75% and create a joint venture, but you can also sell the whole wind farm, which makes it very comfortable for a company that has some financial stress. Because you don't commit to one or two billion [euros], you only commit to the next project, and even that project is flexible as such, because there is a liquid market, especially for onshore projects.

"At the moment, we are investing about €300m-350m a year, so our investment plan for the next three years is €1bn. But we make more out of that. Galloper [the 336MW wind farm it will build in the UK North Sea, in which it has a 25% stake] is a good example, where the [total] investment is over €2bn, and our share is a little more than €100m. But we build it and we operate it. So we take partners on board for the large projects, and we also take project-finance structures on board, which enables us to build much more than just our own cash [investing] in projects."

Bünting says Innogy has an onshore wind portfolio of about 1GW and an offshore pipeline of 2.5GW, the biggest chunk of which is two UK projects, Triton Knoll and Dogger Bank.

RWE Innogy is also "looking intensively" at investing in solar projects in less developed markets, mainly the Middle East and Turkey. However, RWE's recent acquisition of a minority stake in German PV developer Conergy is "not a strategic investment — it was an investment by our trading subsidiary only for financial reasons. They're going to sell out of their share when the company has been restructured and then will be floated".


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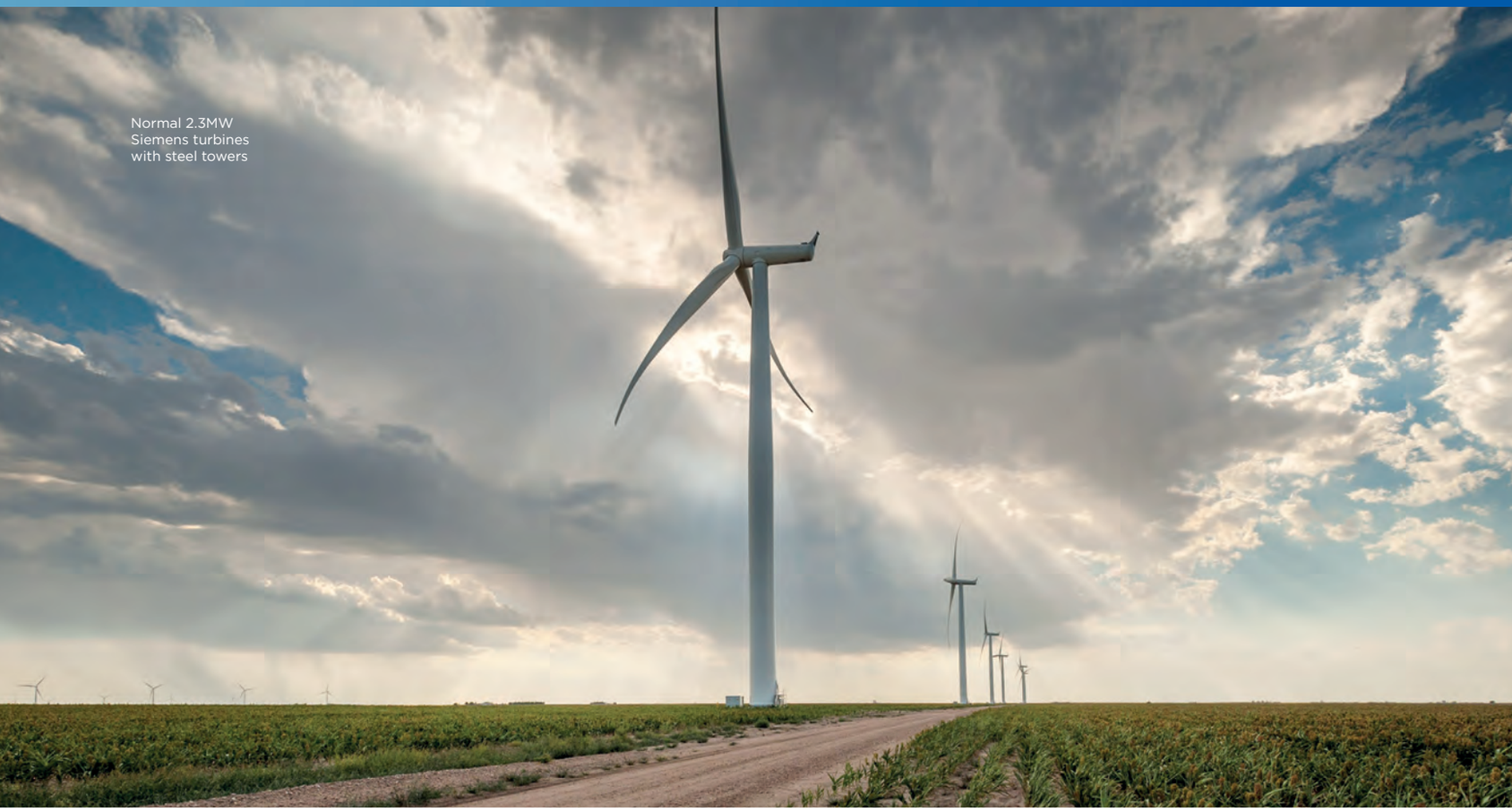

Normal 2.3MW Siemens turbines with steel towers

Siemens to build tallest turbine in the US

KARL-ERIK STROMSTA

MidAmerican Energy has tapped Siemens to build a concrete tower that will contribute to the tallest onshore wind turbine ever erected in the US — more than 40% taller than most turbines in MidAmerican's fleet.

The concrete tower, to go up at the 154MW Adams project in Iowa, will support a 2.3MW Siemens nacelle. The complete turbine will measure 115 metres from ground to hub. Its blades will reach 169 metres in to the air — the same height as the Washington Monument.

Most of the turbines in MidAmerican's fleet stretch 80 metres from ground to hub.

The additional height will allow MidAmerican to tap the stronger winds found at higher altitudes.

It will be the first concrete tower in MidAmerican's large wind fleet, and the first concrete tower project for Siemens in North America.

Siemens and MidAmerican view the tower as a "prototype" for future concrete-tower turbines in the US. The ability to build taller turbines cost-effectively is seen as critical to unlocking potentially huge markets in geographies like the southeastern US, where little wind development has taken place.

"Advancements in turbine design and construction techniques are opening up new opportunities for development of renewable resources," says Mike Gehringer, MidAmerican's vice-president for renewable energy.

"We want to continue to lead in bringing innovative energy solutions to our customers and the state of Iowa."

In contrast to standard steel towers, which are made in a factory and then transported in one piece, crews will pour the concrete into segments and then assemble the tower onsite. MidAmerican's 64-turbine Adams project is due for completion by the end of 2015.

Iowa-based MidAmerican Energy, part of Warren Buffett's Berkshire Hathaway Energy, is a rate-regulated utility serving customers in the Midwest US. Wind accounts for nearly 40% of MidAmerican's 8GW of generation capacity.

Berkshire Hathaway Energy was the third-largest owner of US wind capacity as of the end of 2014, according to the American Wind Energy Association.

Spar buoy being built for Fukushima Forward final phase

BRIAN PUBLICOVER

A Marubeni-led consortium is building an advanced spar buoy for Hitachi's 5MW downwind turbine, as part of the second phase of Japan's Fukushima Forward floating wind demonstration project.

Construction is progressing "smoothly" at Hitachi Zosen's shipyard in Osaka, said Marubeni's project director Tomofumi Fukuda on the sidelines of *Recharge's* Floating Wind Power Debate at EWEA 2015.

The consortium, which includes Hitachi and Mitsui, expects to install Hitachi's 5MW machine roughly 30km off the coast of Fukushima prefecture in the first quarter of 2016.

The installation will wrap up the second phase of the state-backed project.

Fukuda said that a 7MW turbine supplied by Mitsubishi Heavy Industries (MHI) — the first machine of the project's second phase — will probably start generating electricity by the end of this year, but "it depends on the sea conditions". MHI engineers are often unable to visit the demonstration site due to high waves.

Photograph | Siemens

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Five Minutes with...

RÉMI COULON

- Rémi Coulon is chief commercial officer of Adwen, the offshore wind joint venture between Areva and Gamesa. He spent 11 years at Areva, first in nuclear and then in its renewables business group.
- Before that, Coulon worked in lifecycle management consultancy in Paris and as a director with PwC in the US. He has a master's degree from France's AgroParisTech engineering school.

Adwen's global strategy has its roots firmly in European offshore, the OEM's chief operating officer tells **Bernd Radowitz**

Could you give us an update of French offshore projects with Adwen turbines? When do you expect first turbines in the water? We have three projects so far in France, totalling almost 1.5GW capacity, all to be equipped with Adwen 8MW turbines: Baie de Saint-Brieuc [62 turbines, Round 1 tender], Dieppe Le Tréport and Yeu-Noirmoutier [62 turbines each, both from Round 2]. Baie de Saint-Brieuc is a 77sq km offshore wind farm... 17 km off the coast of Britanny, in northern France. In July 2014, Ailes Marines, the consortium of Iberdrola, Eole-Res and Caisse des Dépôts developing the wind park, asked the government for authorisation to switch the 5MW turbines originally planned for the new 8MW turbines. In June of this year the government authorised the change. The project is scheduled to be commissioned in 2020.

Dieppe Le Tréport and Yeu-Noirmoutier... will be built in Normandy and Pays de la Loire. Both projects are owned by a consortium made of Engie, EDP Renováveis and Neoen Marine, through the project company Les Eoliennes en Mer. The public debates have just finished. Les Eoliennes en Mer is going through the so-called de-risking phase, comprising [mainly] environmental and geotechnical surveys. Both projects... are scheduled for commissioning in 2021.

How important is the French offshore market for your company? The French market will be very important in the coming years for Adwen as we look to consolidate our position in the European market. We have a 1.5GW pipeline in the country, meaning that our activity there in the coming years will grow considerably with the development of an industrial base in the country. Our ambition is global, as we aim at garnering a market share of close to 20% in Europe by 2020. We are actively tendering all over Europe as well as in Asia. We have a global industrial strategy to tackle a global market.

Where will the turbines for the French market be produced? In France? In Germany? The turbines for the French projects will be supplied from Le Havre in France, which will complement our established industrial base in Germany. Le Havre offers a significant area for production and storage, direct access to the sea, easy inbound logistics access and an experienced workforce base, thanks to the strong industrial background in the lower Seine axis. From 2018, both Bremerhaven [in Germany] and Le Havre sites will manufacture Adwen 8MW turbines. While the factories in Le Havre will be fully loaded with the French projects until 2021, Bremerhaven will manufacture the turbines for upcoming projects, both sites complementing each other and adapting to projects' requirement.

How realistic is France's 2020 offshore target? France has a great potential for offshore wind and marine renewable energies. Government has set an ambitious target of 6GW by 2020 and set in place the conditions for achieving it: 3GW in capacity has already been attributed through the first two tenders in 2012 and 2014, and a third tender is expected in coming months. The 6GW target is definitely reachable, even though the timing can vary on the way. What is important is that there is a clear direction and quantified objectives and that the right conditions for the development of the industry are in place.

Do you plan to participate in the third round of the offshore tender? We have an important track record and are developing an industrial base in the country. We will be ideally positioned to be a key player in a third... tender, though its conditions remain to be defined.

Are you participating in the tender for floating offshore pilots? We are in active discussions with utilities for those tenders.

Photograph | Adwen

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Photos of the day

1) Hauke Beck, research assistant, ForWind — University of Oldenburg, Germany, at yesterday's 'Wakes: LiDAR measurements, layout optimisation and modelling uncertainties' session; 2) EWEA staff (*left to right*) Alice Rosmi, Silvia Zappino, Joana Griffin and Ariola Mbistrova; 3) Poster competition winners (*front row from left*): Matthew Cand (Hoare Lea Acoustics); Christoph Heilmann (BerlinWind); Arne Gravdahl (collecting on behalf of colleague Di Li) (WindSim); Baldwin Dumortier (Inria) and Christopher Crabtree (Durham University); 4) EWEA boss Giles Dickson presenting the poster competition awards; 5) Melchior Karigl of the European Investment Bank, *left*, and Jan Rufer of GE at the 'Financing Europe's wind energy potential: lost stream or land of plenty?' session

Photography | Jason Bickley/EWEA