

EWEA 2015

DAY TWO

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RECHARGE

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Anne McEntee, Anders Sørensen and Cliff Harris, general manager for GE Renewables in Europe, at EWEA 2015 yesterday

GE cautious on offshore turbine factory

**DARIUS SNIECKUS
BERND RADOWITZ**

GE would need a solid pipeline in place before building a full-scale offshore turbine factory in the US or elsewhere beyond Europe, it tells *Recharge*, as it confirmed it is integrating offshore wind as an operating unit after the €9.7bn (\$10.3bn) acquisition of Alstom's energy assets.

The US company used EWEA 2015 to debut its enlarged GE Renewable Energy operation, now upgraded to a full business division following the Alstom deal from its previous status within GE Power & Water.

The French company expands GE's

global renewables fleet to more than 30,000 turbines and enlarges its European "footprint" by 50%.

"Over the past few years, we have really focused on making our wind business more global. The Alstom deal helps us gain local experience in key growth regions," says GE's onshore wind chief executive, Anne McEntee.

Among other assets, Alstom gives the US giant an impressive European offshore pipeline of close to 2GW, establishing GE at once as an offshore player to be taken seriously.

GE had previously ventured into offshore in a much more limited way, supplying the 25MW Arklow Bank wind park in the Irish Sea in 2004 and buying Norway's ScanWind in

2009, but eventually deemed further activity in the sector unviable.

"Then, the onshore wind market was growing at a good rate; now that we look at the total global energy business — including the first US offshore wind project — we are confident that Alstom is going to provide a rapid entry into a great business for GE," McEntee explains.

GE has just announced the construction of a temporary facility at the Port of Providence, Rhode Island, to assemble turbine components for the 30MW Block Island offshore project, which will use 6MW Haliade machines developed by Alstom and manufactured in France.

But for any further-reaching manufacturing commitment in offshore beyond Europe, economic viability remains paramount, including in its US home market, insists GE's new chief executive for offshore wind, Anders Sørensen.

"If you are going to build a fully fledged factory, to make that financially viable for anybody — and we saw that in the UK — you need a pipeline that covers, say, 100 units per year for a sizeable number of

Continued on page 2

VISIT **RECHARGE**
AT STAND K22

GE cautious on offshore factory

Continued from Page 1

years before you are going to do that investment,” he tells *Recharge*.

GE is now looking at all projects that “have a meaningful purpose” off the US coasts, which it considers to be an increasingly interesting market.

However, even if GE were to win another offshore project with 50-70 turbines, that wouldn’t prompt it to build a factory yet.

“I would say I don’t think that is going to buy you a new factory. You need a longer and a more viable pipeline before you are going to do those kinds of investments,” Soe-Jensen says.

The same is applicable to Asia, where GE is monitoring the potential to build offshore wind farms in several countries, among them China, Taiwan and India, Soe-Jensen reveals, adding that “just getting a factory off the



ground alone takes a couple of years”.

He also cautioned that despite the industry’s high hopes for cost reduction, a “plateau” on how far prices can go down may be reached in the next three to five

years. By then “the size of turbines, and the loads from the turbines, will dictate some foundations and some installation tools, where I think we will get a pause in the decrease of levelised cost of energy”. ☐

De-risking delay to third French offshore tender

BERND RADOWITZ

The French government has postponed its long-awaited third offshore wind tender to carry out preliminary studies on new offshore zones to de-risk further projects, industry body France Énergie Éolienne (FEE) says.

A third round was originally planned for this year. But the launch of a tender of 500MW-3GW is now likely to happen only in the third quarter of 2017, which would mean leaving it to the next government after elections in the spring of that year.

“We would like everything to be advanced by one year,” FEE president Frédéric Lanoë tells *Recharge*, adding that at a meeting with the government tomorrow, his organisation will also lobby for as high a volume as possible. ☐

Photograph | Jason Bickley/EWEA

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Siemens targets offshore installation cost

BRIAN PUBLICOVER

Siemens has announced measures to optimise the installation of offshore wind turbines, and claims a logistics concept unveiled yesterday at EWEA 2015 will slash turbine transport costs by 15-20%.

“Siemens is working on all parts of the value chain... it’s not limited to the turbines,” said Michael Hannibal, chief executive of Siemens Offshore. “Otherwise we won’t be able to make [offshore] viable.”

According to specifications provided by the German group, transport-service specialist Deugro Danmark will build two customised vessels — each 140 metres long — to move unwieldy rotor blades and heavy nacelles.

By 2017, Siemens hopes to start using the vessels to ship components between factories it is building in Cuxhaven, northern Germany, and the northeast English city of Hull, to ports on the North Sea.

The *Necon 1* vessel — which will



The two new transport vessels will help Siemens cut offshore costs

be able to carry eight of Siemens’ D7 turbine nacelles simultaneously — will be ready for use by September 2016. It will feature a retractable roof to provide crane access.

Richard Thomsen, managing director of Deugro Danmark, tells *Recharge* that it will finish

building the second vessel, the *Necon 2* — which will be able to move 12 rotor blades at a time, as well as towers — by March 2017.

Rederij L’Avenir, a unit of Dutch firm Concordia, will operate the vessels.

Siemens will be able to roll components on and off the vessels

via its “Ro/Ro” process, which it describes as an innovative way to transport ultra-long blades and heavy nacelles.

The company also says it will introduce new guidelines in the coming months to shorten the time needed to install and commission turbines. ☐

Utilities’ renewables stance ‘risks creating lost decade’

CHRISTOPHER HOPSON

Power companies’ opposition to stronger renewables targets runs the danger of creating “a lost decade in Europe”, says a Member of the European Parliament.

The Green Party’s Claude Turmes told EWEA 2015 yesterday

that renewables investors are living with the consequences of a campaign by utilities to destroy the system of national targets and support schemes.

Turmes said if a stronger 30% energy-efficiency target is agreed by the European Parliament next year, the 27% renewables target by

2030 would end up looking weak. “I think it would be a disastrous message for Europe if this happens, as the level of ambition for renewables in the Americas, China and Brazil will then be greater than in Europe,” he warned.

However, Francesco Venturini, chief executive of Enel Green

Power, said: “Europe is not a great market for us any more.

“We cannot live with uncertainty in Europe. It is very difficult. We are not talking about big margins in our business, but more than 90% of our investments are currently going to other continents outside Europe.” ☐

Photograph | Deugro

THE GEARLESS WIND TURBINE



Very glad to welcome you on our booth L03



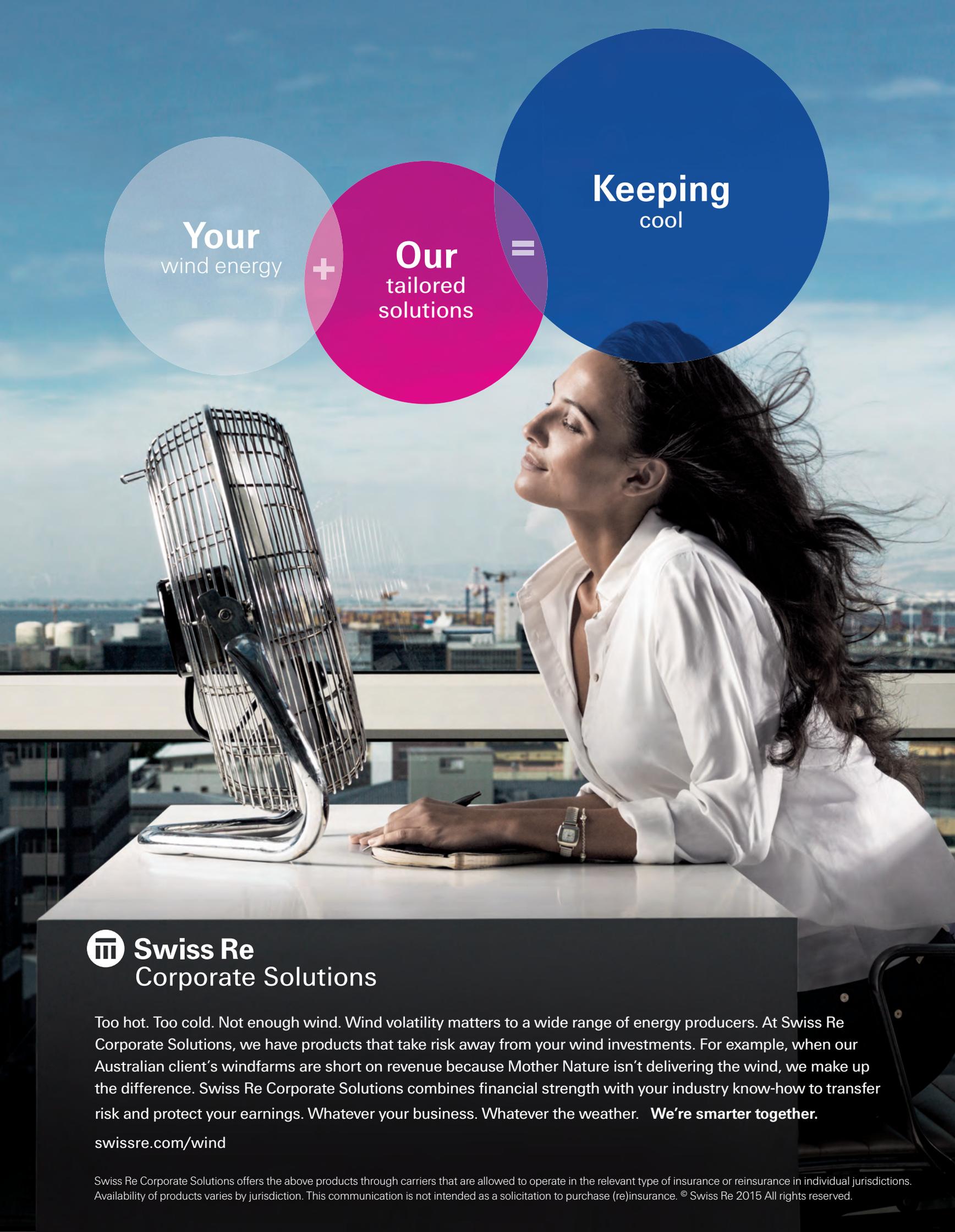
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Gamesa launches 3.3MW flagship

DARIUS SНИЕCKUS

Gamesa has launched the flagship turbine of its new 3.3MW platform, a range of machines designed for medium- and high-wind sites in the world's northern regions.

The first model, the G132-3.3MW — which is based on the Spanish OEM's G114-2.0MW and G114-2.5MW — will fly a 132-metre-diameter rotor powering a three-stage (two planetary stages and one parallel) gearbox and a doubly-fed induction generator.

"This is a design that we see for the Northern Europe and North American markets," Gamesa chief technology officer José Antonio Malumbres tells *Recharge*.

"These are increasingly important regions for the wind-

power industry. We feel now is the right time for us to launch a turbine for these markets," he says. "We expect this turbine will provide the best CoE [cost of energy] in the 3-3.3MW segment for Class 2 winds, and also those other non-northern countries such as South Africa and Australia that are normally oriented [towards] high nominal power turbines."

The new machine is designed to generate over 50% more energy than the G114-2.0MW and 30% more than G114-2.5MW in Class 2 winds.

The 64.5-metre blades will be a traditional glassfibre design validated on Gamesa's G132-5.0MW unit — the offshore machine launched before the company entered into a joint



A computer rendering of the 3.3MW model

venture with Areva to form Adwen.

The G132-3.3MW will include a choice of an "extensive portfolio" of steel and concrete-steel hybrid towers with heights ranging from 84 to 134 metres, allowing the concept to meet different maximum blade-tip height restrictions in certain markets.

Being a northern region turbine, the G132-3.3MW will be

offered with an optional cold-climate package and blades with icephobic paint and de-icing technology.

"We want to make use of our track record with our earlier platforms so have stayed with a very conventional, proven design, based on 20GW of experience with our 2MW and 2.5MWs," notes Malumbres. □

Photograph | Gamesa

Link 8 wind farms to their correct location and win a fantastic prize!



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WHEN?

Wednesday November 18th: 10 am – 5.30 pm
(winner will be announced at 5.30 pm at the CG booth during the CG beer reception)

Thursday November 19th: 10 am – 5.30 pm
(winner will be announced at 5.30 pm at the CG booth)

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GE unveils new 3MW range

DARIUS SНИЕCKUS

GE Renewable Energy has pulled back the curtain on its new range of 3MW turbines, which will feature an option of two rotor diameters, three generator ratings and five tower heights to “address the complexities of European wind conditions”.

The 3.4-130 and 3.4-137, which join the recently announced 3.2-130, will be GE’s most powerful turbines to date, with the 137-metre-diameter rotor model generating up to 24% higher output than its existing technology.

“Working closely with our customers, this new family of smart, modular turbines will allow us to configure the right technology for a wide variety of site-specific wind conditions,” says GE onshore wind unit chief executive Anne McEntee.

The machines, built on GE’s 2.5



and 2.75MW designs, will have improved load management systems, enhanced control features and more efficient drivetrain technology.

They feature the modular

hardware and software analytics capabilities of GE’s “digital wind farm”, which uses a virtual modelling system that fine-tunes individual turbine configuration and site layout. ☐

Photograph | GE

Moventas’ ‘longer life’ gearbox

Moventas has unveiled a life-extending gearbox designed for the GE 1.5 fleet in North America.

The XL — Extra Life — unit has been devised to tackle “all significant failure modes”. Among its features are a planet-stage carburised structure featuring integrated bearings and improved pitting resistance; upgraded bearings; enhanced lubrication filtration; and vibration and oil particle condition management.

Moventas will begin deliveries in the first quarter of 2016.

Switch unveils FPC+

The Switch has launched a full-power converter for utility-grade turbines. The FPC+, which works with permanent-magnet as well as induction generators, is designed to minimise loss of power flow control and smooth load transitions.

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Europe and US win big in Brazil

ALEXANDRE SPATUZZA

Companies and investment funds from Europe and the US were the main wind winners of Brazil's last renewables auction of 2015, which contracted 548.2MW of wind for an average R\$203.46 (\$53.21) per MWh.

Local investors such as Renova Energia, CPFL Renováveis, Casa dos Ventos, federal power companies and other smaller developers stayed out of the tender, which meant Brazil contracted just over 1GW of new wind in three auctions this year — the lowest since the 246MW procured in 2012 and well below the 2.3GW yearly average since 2009. The average price was 4.4% below the R\$213 ceiling.

Rio Energy — the renewables investment arm of US private equity fund Denham Capital — won contracts for six projects with a combined capacity of 216MW.

Portugal's EDP Renováveis, which has China Three Gorges as a major backer, won contracts for five wind farms totalling 140MW.

Germany's Sowitec and its partners followed with contracts for four projects with a combined 117MW. Spain's Gestamp sold power from the 20MW Pedra do Reino 4.

All these projects are in the Northeast state of Bahia, which has the most capacity to connect new wind to the grid.

Outside Bahia, only two projects won. France's Voltalia won a 27MW contract for the Acre 1 wind farm, expanding existing

capacity in the Northeast state of Rio Grande do Norte, while Brazil's MA Mezanino secured a deal for the 30MW Ventos Maranhenses 5 in the northern state of Maranhão.

The winners have 20-year power-purchase agreements (PPAs), starting on 1 November 2018, when the projects have to be operational. Total investment in the 20 projects is estimated at R\$2.4bn. The tender also contracted 1.15GW of solar.

Élbia Silva Gannoum, head of the Brazilian Wind Power Association, was expecting more than 1GW of wind to be contracted.

"There was interest for more wind power to be contracted, but there weren't enough links to the transmission grids. That is why Bahia was the place where most of the winning projects were located: it has connection," she says.

"The dispute was for points of connection to the grid, not for PPAs." □

Sowitec chief executive Frank Hummel



Photograph | Sowitec

Tender winners

Rio Energy (US) 216MW
EDPR (Portugal) 140MW
Sowitec (Germany) 117MW
MA Mezanino (Brazil) 30MW
Voltalia (France) 27MW
Gestamp (Spain) 20MW

DNV GL AT THE EWEA 2015 ANNUAL EVENT

Find us at Stand H04

We like to invite you to join our side events on the 18th & 19th November:

- **Expert Talk on the launch of the new Turbine.Architect Software tool**

Join the launch of our new Turbine.Architect software tool, enabling turbine engineers and component developers to quickly calculate the impact of their technology on Levelised Cost of Energy for a realistic wind project.

When: 18th November 2015, 12:00 p.m. **Where:** DNV GL booth, number H04

- **Breakfast Seminar on Modelling long flexible blades in Bladed**

An introduction to the requirements of the next generation turbines with long, flexible blades. Join us for this breakfast seminar where we will demonstrate what DNV GL's Bladed software adds to the blade analysis process, and discuss with our experts how it can support your design team.

When: 19th November 2015, 9:30 a.m. **Where:** Exhibition Meeting Room A

- **Workshop on Floating offshore wind - Identifying the challenges and managing the risks**

Join our experts to learn more about the design challenges and risk management of floating offshore wind technology and projects. Highlights include the current status of floating offshore wind in France and how to make floating wind concepts more economic.

When: 19th November 2015, 11:30 a.m. **Where:** Exhibition Meeting Room A

- **Expert Seminar on High product quality and flexible certification**

Get an exclusive introduction into DNV GL's new standard for rotor blades which will be published end 2015. Furthermore, questions on maintenance, cost reduction and your benefits on working according to this standard will be addressed.

When: 19th November 2015, 1:45 p.m. **Where:** Exhibition Meeting Room A



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Wednesday 18 Nov

HAPPENING TODAY

Conference sessions: Top picks

09.00-10:30

Wind energy turning blue chip companies green

Room: Montmartre

11.30-13.00

Market updates — focus on France

Room: Montmartre

Atmospheric flow over terrain

Room: Montparnasse

Wind power supporting the grid

Room: Belleville

13.30-14.15 **Visionary debates**

Lunch area

14.30-16.00

Social acceptance of wind farms

Room: Montmartre

Power curves in the real world

Room: Montparnasse

Supply-chain models

Room: Belleville

17.00-18.30

Cumulative impacts on birds

Room: Montmartre

Annual energy production — let's get it right!

Room: Montparnasse

Offshore wind — cost-reduction pathways from the finance industry

Room: Belleville

NEW AT EWEA 2015 ANNUAL EVENT

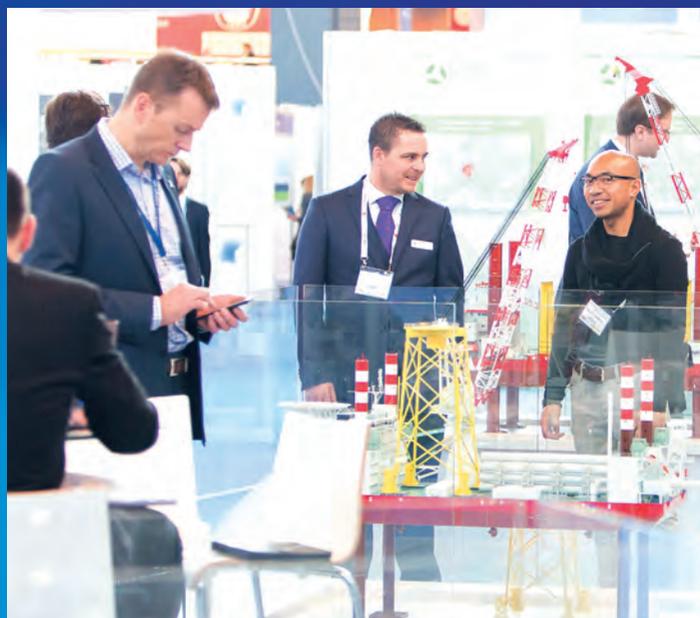
Offshore village

Gateway to the energy of the future.

A platform to communicate on recent success stories, case studies and ongoing progress in building an efficient supply chain to achieve an improved long-term ROI.

Career area

A great platform for participants to be informed about current and future job opportunities within the European wind industry. Discover the current vacancies and opportunities posted by exhibiting companies at EWEA 2015 and by other member organisations of EWEA.



SIDE EVENTS

Networking opportunities to meet decision makers, the right people relevant to your business, and to secure deals.

Invest in BRASIL — Wind Power

09.00-15.30

PEGASE (Level 2), Pre-registered participants only

This seminar and reception will bring together sector leaders to discuss the opportunities and challenges of investing and doing business within the renewables sector in Brazil. Networking will take place from 13.30-15.30 in the same location.

Intergovernmental Offshore Initiative — third work session

09.00-18.00

Espace 2000 A and B (Level 1); invitation only

Delegates from European governmental organisations meet in Paris to discuss and exchange on their respective practices on both economic and environmental aspects of offshore wind deployment.

EERA JP Wind — The future of wind farm design

10.30-13.00

Espace 2000 C (Level 1); all participants

This workshop will present the audience with concrete, ready-to-apply results of the EERA-DTOC project, and first results and goals of the EERA-IRPWind programme.

The challenges of designing 10-20MW offshore turbines

15.00-18.30, **Espace 2000 C (Level 1); pre-registered participants only**

Offshore wind energy is generated by immense wind turbines, which gives rise to new design challenges. This event discusses many of the complex design aspects.

WINDTRUST project: Reducing the cost of wind energy generation with innovative component designs

15.30-17.30

Espace 2000 D (Level 1); all participants

As the project enters its third and final year, this event will be an opportunity for participants to learn about the innovative designs and project achievements to date.



MEET THE EXPERTS

Media lounge; all participants

10.45–11.30

EU market: Whom to keep on the radar, Giorgio Corbetta, National Markets & Policies Analyst, EWEA

16.15–17.00

COP21: Offshore: United on the tightrope to success, Andy Ho, Offshore Wind Analyst, EWEA

VISIONARY DEBATE SERIES

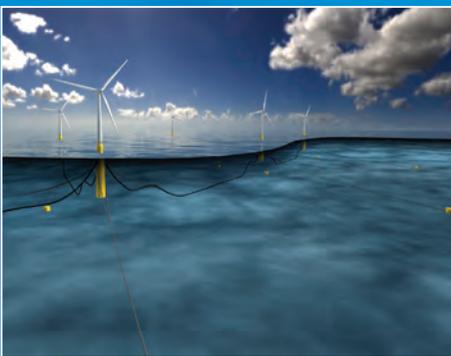
Every day from 13.30–14:15

Lunch area; all participants

EWEA and MHI Vestas Offshore Wind are proud to host a series of inspirational debates tackling some of the world's most challenging issues, moderated by Euronews anchor Chris Burns.

Not a conference delegate?

You can still purchase single conference session passes at the registration desks.



DEBATE

Presented by
RECHARGE

Floating wind power debate

11.30–13.30

Media Lounge; all participants

Panel: Henrik Stiesdal, ex-Siemens; Trine Ingebjørg Ulla, Statoil; Tomofumi Fukada, Marubeni; João Metelo, WindFloat; Johan Sandberg, DNV GL - Energy

The panel of leading thinkers on floating wind power will discuss the lessons of the pilot projects, plans for the first floating arrays, and how the sector is overcoming barriers to commercialisation.

CHILL OUT

Stand parties

CG beer reception

16.30–17.30

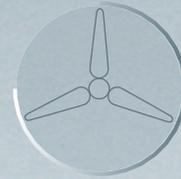
CG stand H06; all participants

The ideal opportunity to gather around with other wind industry professionals. The beer reception will offer the best Belgian and European beers.

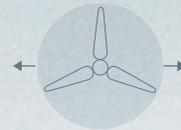
Gamesa has decided to cancel its booth stand party planned for today, due to the tragic incidents that took place in Paris on Friday night. Gamesa would like to offer its condolences to the victims and their families.



**4 MW
PLATFORM**



NEW: E-141 EP4
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IEC IIIa



Ø 126 m
IEC IIa

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EWEA 2015
17 - 20 November
Booth H13

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**2 MW
PLATFORM**



NEW: E-103 EP2
Ø 103 m
IEC IIIa



Ø 92 m
IEC IIa



Ø 82 m
IEC Ia + IIa

Low-cost floating turbine concept unveiled

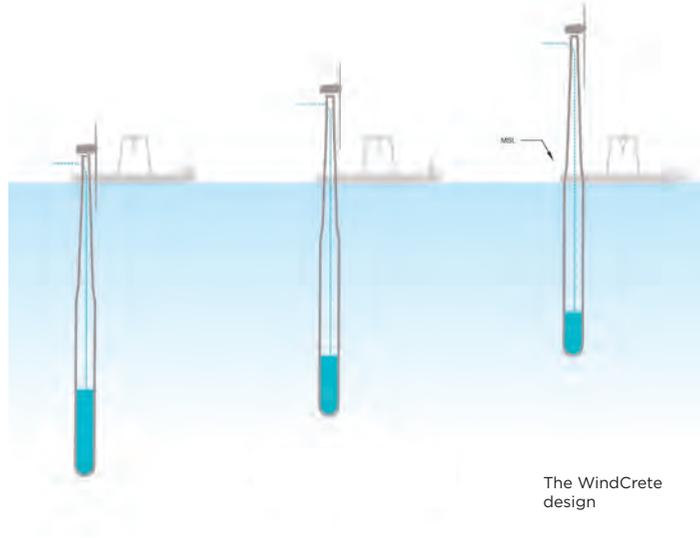
DARIUS SNIECKUS

A floating wind turbine concept that could slash the cost of energy (CoE) of deepwater units to €120 per MWh has been unveiled by researchers at Spain's Universitat Politècnica de Catalunya (UPC).

The WindCrete, which will make savings through its streamlined design and cheaper construction materials, is a cylindrical, spar-like concrete structure featuring a large float and a ballast base that make it "self-stabilising". It is designed for turbines of 5-15MW moored in water depths of at least 90 metres.

UPC researchers Climent Molins and Alexis Campos say the concept's main innovations are the "seamless, monolithic structure and the use of concrete for its construction".

Building costs are calculated to be 60% lower than steel designs,



with the use of concrete making the WindCrete more resistant to harsh offshore conditions and giving it "fewer maintenance requirements" over a 50-year lifespan.

"The absence of joints in the platform increases its durability against the effects of wind and sea and avoids the damage that normally appears in transition areas," say Molins and Campos.

The WindCrete is being advanced in collaboration with the University of Stuttgart, Gas Natural Fenosa and pan-European technology development group KIC-InnoEnergy, within the framework of the EU-funded European Alternative Floating Offshore Substructures project.

A 1:100 scale model has been put through its paces in the wave flume of the UPC's Maritime Engineering Laboratory.

Floating wind power has sprung forward recently with the announcement by Norway's Statoil of a financial investment decision on its 30MW Buchan Deep array off Scotland, which will be made up of five steel spar-based turbines.

The sector's unofficial 2020 CoE target — first set by the UK Department of Energy and Climate Change — is £100 (€142) per MWh, a figure widely thought to be achievable. ☒

Photograph | UPC



DW61 900kW
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for medium wind speed sites and our European product catalogue.

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RICHARD A KESSLER

US developer Trident Winds has filed initial papers to build California's first offshore wind farm — 100 turbines on floating platforms about 40km off the coast.

The project, at Morro Bay, halfway between Los Angeles and San Francisco, could exceed 1GW, depending on advances in turbine size and technology by early next decade, when Trident hopes to have all permits and regulatory approvals.

Trident chief executive Alla Weinstein admits that opposition could be fierce from interest groups and coastline residents. The proposal has drawn mixed reaction from California's politically influential and well-financed environmental community, fishing interests, local and state officials, and other stakeholders. Trident has begun meeting them and state regulators.

Morro Bay has excellent wind resource, and existing infrastructure for interconnection



Move to kick-start California offshore

Alla Weinstein knows Trident faces a battle to get the project up and running

and transmission of electricity to load centres.

The possibility of floating wind along the west coast holds enormous growth potential for the US offshore sector, whose focus has been almost exclusively on shallow Atlantic waters from Massachusetts to North Carolina.

Until now, offshore wind has

also received little attention in California from Governor Jerry Brown and power-industry regulators, who have favoured solar, onshore wind and, to a lesser extent, geothermal.

That could change. Last month, Brown signed a bill to increase the state renewables mandate to 50% by the end of 2030 from 33% by

2021. This will require dozens of gigawatts of new generation resource, and offshore wind may be able to gain a slice.

A slice may not sound like much, but California is the second-biggest state electricity market after Texas and its \$2.2trn economy is the seventh-largest in the world. ☐



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German vice-chancellor and energy minister Sigmar Gabriel, left, and Irena boss Adnan Amin

Germany 'needs green heat and transport push to hit 2030 goal'

BERND RADOWITZ

Germany could boost its share of renewables beyond its already ambitious targets for 2030 if it speeds up the deployment of green energies to the heating and transport sectors, according to the International Renewable Energy Agency (Irena).

"Germany's rapid renewable-energy expansion and ambitious targets have demonstrated to the world that a 30% share of renewable power is possible," said Irena director-general Adnan Amin, while presenting the *Renewable Energy Prospects: Germany* report.

"However, to meet even higher shares and continue building one of the world's most energy-efficient, sustainable and low-carbon energy systems, Germany must now expand its focus beyond the power sector."

The country has largely focused its *Energiewende* — transition from nuclear to renewable energy — on the electricity sector, boosting the green share of its power generation from 6% in 2000 to an expected 33% at

the end of this year.

Rainer Baake, the state secretary in Germany's Energy and Economic Affairs Ministry, said the government seeks to integrate an ever-larger share of renewables into the power system at the lowest possible cost.

"With last week's decision on the Act on the Further Development of the Electricity Market, we have set the regulatory framework for the German electricity market of the future. Our future market design will meet the challenge of synchronising conventional and renewable electricity," he said.

In the report's reference case, where technology deployment is driven largely by green electricity generation, Germany would only reach a 27% renewable share in total energy consumption by 2030 — up dramatically from 10% in 2010, but still short of the government's 30% target.

Increasing renewables in heating and transport would allow Germany to hit a 30-37%

renewables share by 2030, Irena believes. That would imply boosting wind capacity to 88GW (72GW onshore and 16GW offshore) by 2030, up from 32.1GW at the end of 2014, and PV to 75GW from 38.2GW. More than 10GW of solar could come from decentralised generation coupled with storage, Irena reckons.

The study — part of the agency's REmap 2030 global

Germany must now expand its focus beyond the power sector

analysis programme — assumes that the effort will require an average of \$15.7bn (€14.7bn) of investments per year. On the upside, if fuel and carbon costs are considered, the REmap scenario would mean \$2.4bn in annual savings for the country, compared to the reference case. Germany's fuel import costs alone would be reduced by almost \$30bn per year by 2030 in the higher scenario. ☐

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ANDREW LEE

Senvion is closing its Ontario blade plant, amid a downturn in demand in the previously booming local market.

The German OEM says the factory run by its PowerBlades subsidiary in Welland has completed all production linked to local orders under the Canadian province's feed-in-tariff (FIT) and will shut with the loss of 136 jobs.

"Closing down the blade facility was a last option," Senvion says, "but owing to unacceptably high financial risks, a necessary one, due to the reduction in near-term demand from regional markets that Senvion was planning to serve from its Ontario facility. These market reductions made the PowerBlades facility no longer financially viable."

The plant opened in late 2013 after Senvion (then called REpower) won a clutch of orders in 2012 under Ontario's FIT, which established the province as a renewables-friendly policy pioneer. It was among a procession of foreign OEMs to establish production there under local-content rules that were subsequently declared invalid by the World Trade Organization.



But Ontario has moved to procurement rounds that are ferociously competitive — a recent 300MW tender was oversubscribed sevenfold — and the formerly robust Canadian market is set to see a sharp dip. Senvion's German compatriot

Siemens recently told *Recharge* it plans to stick with its own blade factory in Ontario despite the impending downturn, instead seeking orders in neighbouring Quebec and elsewhere.

Senvion says it will also continue to seek opportunities in the region

and "remains 100% committed to the wind industry in Ontario". Blades for any future projects will come from third-party suppliers.

Senvion, which is owned by US investment group Centerbridge, will help the workers affected as they try to find other jobs. ☐

'Fast growth till 2018' amid race to beat subsidy cuts

ANDREW LEE

Short-term extra growth driven by expiring policies is counterbalanced by a longer-term downgrade over regulatory uncertainty in the latest quarterly wind-market forecast update from

consultancy MAKE.

The industry analyst adds 5.5GW to its predictions for 2015-18 global installations thanks to greater-than-expected demand as policy deadlines loom, primarily in the US and Germany.

But the Q4/2015 *Global Wind*

Power Market Outlook Update also knocks 4.3GW off 2019-24 growth expectations over longer-term policy doubts, especially in emerging European offshore markets. The two add up to a 0.2% upgrade to the latest ten-year installation forecast over that

given in MAKE's Q3 analysis.

The consultancy says firm turbine orders in the first three quarters of the year increased 44% year on year to more than 36GW, even though the market has slowed since Q2. China led the way in Q3 with more than 1.7GW. ☐

Photograph | Senvion



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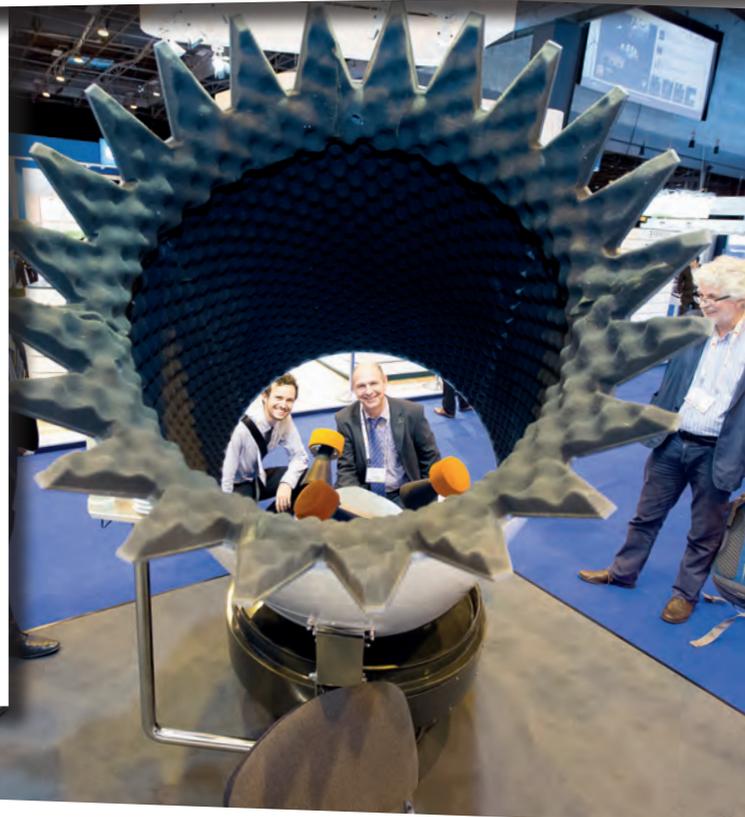
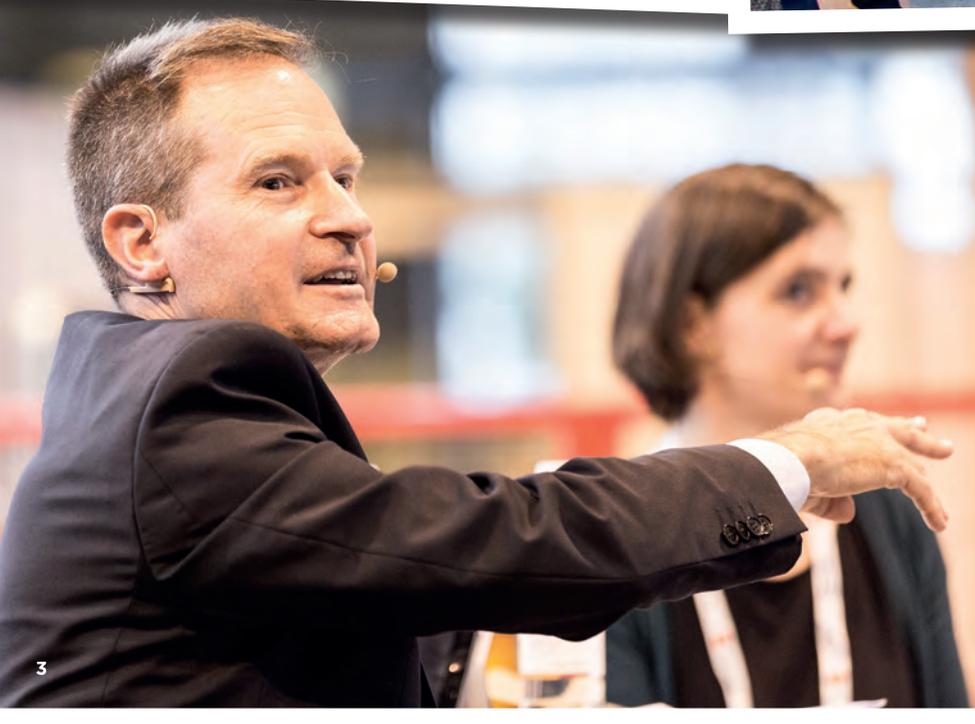
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See you
in Warsaw!



Photos of the day

1) French energy minister Ségolène Royal speaking at yesterday's opening session; 2) (left to right) EWEA chief executive Giles Dickson; Rainer Baake, state secretary at the German federal energy ministry; Belgian energy minister Marie-Christine Marghem; Ségolène Royal; EWEA chairman and Siemens Wind Power chief executive Markus Tacke; and Maroš Šefčovič, vice-president for energy union at the European Commission; 3) Euronews journalist Chris Burns chairing the Visionary Debate; 4) an AQ System sonar wind measurement device at the exhibition; 5) Delegates in front of a Yestowindpower poster

Photography | Jason Bickley/EWEA | Tim Buelens/EWEA



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