

EWEA OFFSHORE FRANKFURT 2013

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SHOW OF HANDS: Alfonso Faubel at EWEA Offshore yesterday

Make or break for offshore?

EU decision on renewables in spring will shape the industry, writes **Karl-Erik Stromsta**

The negative knock-on effects for offshore wind would be swift and severe should Europe fail to adopt a 2030 renewables target when the issue comes to a head next spring, experts warn.

EU heads of state will meet in March with the intention of thrashing out a climate and energy policy taking the bloc through to the end of the next decade, in what some see as a make-or-break moment for Europe's offshore industry.

Lobbying efforts ahead of that meeting are ferocious, with the impact of renewables on electricity costs emerging as a

|| If you see the framework missing, then you'll see the market missing at a certain point in time

central issue. "You'd still have a trailing effect from the existing [offshore wind] pipeline" in the event that no 2030 renewables target were set next year, says Alfonso Faubel, senior vice-president for wind at French turbine manufacturer Alstom.

"[But] if you see the framework missing, then you'll see the market missing at a certain point in time," he told the opening panel at EWEA Offshore 2013.

The mixed messages at the EU level come on top of spiralling political uncertainty in the UK, the world's largest offshore wind market, and an apparent downgrading of ambition in Germany, the second-largest.

Jens Tommerup, chief executive of the new Vestas-Mitsubishi Heavy Industries offshore joint venture, says even a short lull in the market could see Europe ceding many of its early-mover

advantages to Asia. "It's so nice to come [back] to Europe and see how much we are ahead of Asia," says Tommerup, who recently returned from his former position as Vestas' president for Asia Pacific & China. But Asian interest in offshore wind is "speeding up very, very fast".

Should the European market slow down, it is easy to imagine a

Continued on page 2

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**BERND RADOWITZ
KARL-ERIK STROMSTA
CHRISTOPHER HOPSON**

Industry leaders are coming to terms with the likelihood that Germany will slash its 2020 offshore wind target to 6.5GW from the 10GW previously envisaged.

A preliminary version of the coalition contract between the Christian Democrats (CDU) and the Social Democrats (SPD) — probable partners in the incoming government — agrees to lowering the target.

The deal prompted EnBW chief executive Frank Mastiaux to tell the party negotiators the lower target could cause a “collapse of the appropriate expansion efforts” in the sector.

But Andreas Nauen, chief executive of Suzlon’s Germany-based REpower unit, is far less dramatic, acknowledging that the industry would not have been able to erect 10GW off Germany’s coast by the end of the decade anyway.

“The reduction to 6.5GW, if you’re honest, is an adaptation to reality,” Nauen told *Recharge* in Frankfurt. “It’s no disaster.”

Looking at it from the outside, one might think that the industry’s future is completely diminishing, but a more realistic target can actually be motivating, he told the audience at EWEA Offshore’s opening panel.

Dong Energy chief executive Henrik Poulsen believes offshore wind has the potential to play a larger role, but nevertheless says the lower goal still represents a strong, tangible political commitment to the sector.

German target cut ‘not a disaster’



STRONG SIGNAL:
Dong chief executive Henrik Poulsen on the EWEA panel

“The new targets proposed by the German coalition are, we believe, solid targets,” Poulsen said. “We find them sound enough to continue investing in Germany.”

On Monday, Dong gave the

green light for its largest ever investment, the 582MW, €2.2bn (\$2.97bn) Gode Wind 1 and 2 projects in the German North Sea.

The coalition negotiators also agreed to lower the country’s

2030 offshore goal to 15GW from the previous 25GW. The targets still hinge on whether the parties can agree to form a government. SPD members will vote on the coalition deal in a party referendum next month. ☐

European renewables decision crucial for offshore

From page 1

world in the not-too-distant future in which European offshore turbine suppliers no longer own the world’s best technology, Tommerup warns.

In contrast to more modular forms of renewable energy, offshore wind is vulnerable to stop-and-start markets, given the

scale and time needed to build projects, says EWEA president Andrew Garrad.

“The politics are different for offshore wind,” he points out. “Whatever we decide now determines what will be done in a decade in the offshore arena.

“[Nevertheless] given the present economic climate, it’s possible that in March we don’t

get a [renewables] target,” Garrad concedes.

Another critical issue is whether the EU again adopts separate goals for renewables, greenhouse-gas emissions and energy efficiency — as it did for 2020. Some member states, including the UK, believe renewables should be forced to compete with other low-carbon

technologies such as nuclear, rather than given its own carve-out.

“All arguments are on the table,” says Jos Delbeke, director-general for climate action at the European Commission. “We are strongly convinced we need to continue with three targets, but the ultimate decision will be taken by the heads of state.” ☐

Endless project launches ‘put off investors’

KARL-ERIK STROMSTA

In spite of the obvious dangers of hustling new, ever-larger turbines onto the market, the offshore wind industry does not have the luxury of patiently refining existing models, industry sources say.

Major industry exhibitions such as EWEA Offshore 2013 often feel like a “competition in bringing new products” to market, acknowledges Michael Hannibal, chief executive of Siemens’



COMPETITION:
Michael Hannibal

offshore wind division.

Some in the sector feel the seemingly endless product-launch cycle has a destabilising effect in the minds of offshore wind investors, who would prefer that turbine platforms are perfected over longer periods of time before being overhauled and upsized.

But Samuel Leupold, executive vice-president for Dong’s wind division, says such patience is not an option given the cost pressures on the industry.

“We need to optimise existing

platforms, but at the same time we need some bold steps,” says Leupold.

“What we want to achieve [as an industry] by 2020 is so big that we need a combination of both. We need larger rotors, we need higher ratings, otherwise we won’t be able to make it.”

Jukka-Pekka Mäkinen, chief executive of Finnish generator maker The Switch, agrees. “The only way to be successful in the offshore business is to have bigger and better turbines,” he says. □

Siemens 6MW turbine earns type certificate

CHRISTOPHER HOPSON

Siemens’ 6MW offshore wind turbine has received the Provisional Type Certificate from GL Renewables Certification (GLRC).

The award is a key step on the way to final certification for the 6MW machine, which has prototypes installed in Denmark and the UK.

The certificate confirms that the turbine design, manufacturing and testing processes meet “all safety relevant items with the normative references”.

“Type certification is required in many countries around the world and is often a condition to apply for international wind power plant tenders,” says GLRC.

Photograph | Jesus Quesada/EWEA



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CONFIDENT:
Andreas Nauen at
EWEA Offshore 2013
yesterday

REpower: 300 factory jobs at risk

BERND RADOWITZ
KARL-ERIK STROMSTA

REpower is confident it will soon win a German offshore order of about 300MW, but may be forced to axe 300 jobs at its blade factory in Bremerhaven if the deal does not go through.

REpower chief executive Andreas Nauen told the opening panel at EWEA Offshore that the jobs hinged on the manufacturer winning a project within the next six months, but was a bit more

upbeat when talking to *Recharge* in a subsequent interview.

“I am very confident that the next offshore order will come,” Nauen told *Recharge*. “Then we will also have work again for the staff [at the blade factory].”

“If we don’t get an offshore order, then we will need to see what to do with our offshore blade factory. But at the moment, we prefer to negotiate with our clients and try to find solutions.”

The company is in “very advanced” negotiations over an order for about 50 of its 6.2MW

offshore machine with a 126-metre rotor diameter, Nauen said. Talks with the prospective client involve discussions about cost reductions, he acknowledged.

REpower’s vice-president for offshore, Norbert Giese, added that what the industry needs now is the confidence of clients to invest in offshore.

The key offshore markets of Germany and the UK do not have stable frameworks in place, meaning investors will not invest the huge sums required to build offshore wind farms — about

€1.5bn (\$2bn) per project — without knowing the future level of support, Giese said.

REpower would like Germany’s incoming government to extend the deadline for the so-called “compression model” for two years. At present, offshore developers can receive a higher feed-in tariff for the first eight years of operation to help with the high upfront investment costs, but only to wind farms that will be grid-connected by the end of 2017. ☐

6.2MW MODEL: Page 17

Bolt-on designed to extend bearing life by 500%

DARIUS SNIECKUS

UK engineering outfit Ricardo is installing an innovative life-extending drivetrain bolt-on in a ScottishPower turbine in Ireland that promises to boost bearing life by as much as 500%.

The company’s MultiLife technology — being developed under the UK Department of

Energy and Climate Change’s recently announced Offshore Wind Drivetrain Innovation scheme — uses a piston-driven system to spread wear damage around a rolling-element gear bearing with a fixed inner race.

The other two technologies being advanced in the Ricardo-led project are a hydraulic-torque truncation concept that deflects

wind loads at they hit the rotor and blades, and a retrofitable next-generation condition-monitoring and prognostics software package.

“The award of funding for this project provides the opportunity for industry to make significant progress in developing and demonstrating them through practical deployment in

challenging wind environments,” says Ricardo’s head of clean energy and power generation Paul Jordan.

“Our broad solutions approach to improving reliability also ensures that a wide range of future wind turbine drivetrains stand to benefit from the cost of energy that these innovations can provide.” ☐

ADVANTAGES:
Aerodyn's
8.0-168 turbine

Aerodyn harnesses the power of two

DARIUS SНИЕCKUS

Aerodyn has unveiled the world's first two-bladed 8MW offshore wind turbine in Frankfurt, and partner Ming Yang is already scouting for prototype installation sites in the Taiwan Strait and South China Sea.

The 8.0-168, which has a 168-metre-diameter rotor, is a down-wind design featuring pitch-controlled blades and a medium-speed drivetrain with

Image | Aerodyn

pioneering electrically excited synchronous generator. Building on the Hamburg company's 3MW and 6MW designs, the machine is made to withstand winds of more than 250km/h.

"The old arguments against two-bladed turbines — noise levels and visual impact — fall away offshore," Aerodyn president Sönke Siegfriedsen tells *Recharge*.

"And there are many advantages: you can assemble the whole turbine, including the

blades, in a harbour, shuttle it out to site by barge and mount it on the tower. The installation is much quicker.

"Compare the total weight and energy yield of a three-bladed [3MW] turbine and our two-bladed one, and they are much the same."

The 8.0-168 will fly 82-metre carbon-capped glass-fibre blades powering a 2.5-metre-long, 3.5-metre-diameter super-compact-drive transmission system, designed by Aerodyn.

"Doing everything in-house means we have a real insight into the detailed design of all components," says Siegfriedsen. "And you can avoid the mistakes that can happen during production at companies supplying your technology."

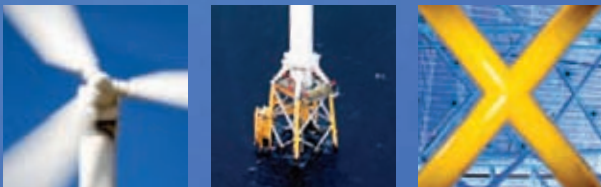
The 6MW prototype, which is in the final stages of assembly at a shipyard in Nantong on the Yangtze River, is due to be erected in March on a six-legged jacket in five to six metres of water off China. □

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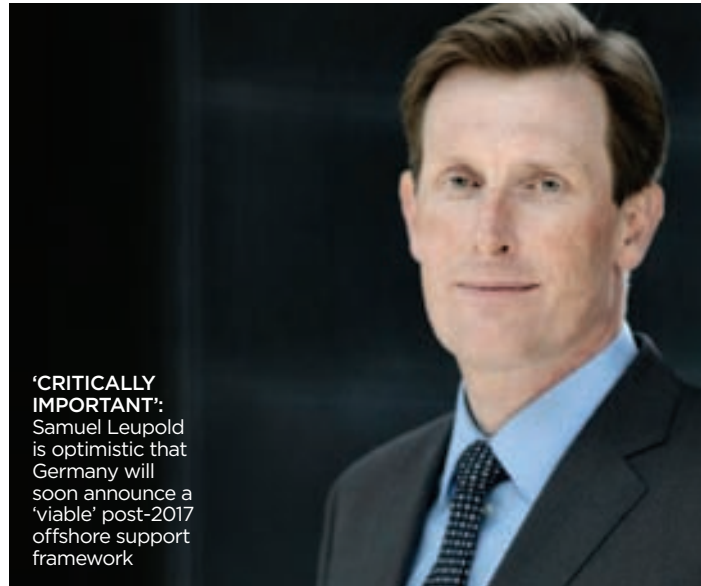
€2bn Dong FID lifts German sector

BERND RADOWITZ

Dong Energy has given German offshore wind a huge boost after making a final investment decision (FID) on its €2.2bn (\$2.97bn), 582MW Gode Wind 1 and 2 projects — and placing an order for 97 Siemens 6MW turbines.

For most of this year, investors had shied away from taking FIDs on German offshore projects, fearing that they may miss the end-of-2017 deadline for the so-called “compression model” — which offers higher feed-in tariffs for the first eight years and helps developers meet high upfront investment costs.

While many companies are worried that long construction times and grid-connection delays could cause them to miss the 2017 deadline, Dong was in an exceptional situation for Gode Wind 1 and 2. Transmission



‘CRITICALLY IMPORTANT’: Samuel Leupold is optimistic that Germany will soon announce a ‘viable’ post-2017 offshore support framework

system operator TenneT has given the utility an unconditional grid-connection confirmation for the two North Sea projects, and is already building the DolWin 2 converter platform

and grid connection that will link them to the mainland.

But for further projects, Dong also needs the incoming government to throw its support behind offshore wind.

“We remain hopeful that the new German government will soon announce a viable support framework for the period post-2017,” says Dong executive vice-president Samuel Leupold.

“For an industry with project life cycles of 30 years, it is critically important to obtain visibility beyond 2017 in order to continue to innovate and mature the technology [and] bring down production costs.”

Siemens Wind Power chief executive Markus Tacke adds that his company intends to reduce offshore wind costs by up to 40% over the next ten years.

“To accomplish this, it is essential that we have clearly defined and reliable framework conditions for the expansion of offshore wind power in Germany,” Tacke stresses.

Siemens has six German offshore projects in its order pipeline. ☐

Photograph | Jeppe Bøje Nielsen

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Plenty of cash offshore, but risk is still a problem

Finance track chair Dima Rifai tells Ben Backwell that a lack of experience is holding back investment

The main barrier to financing offshore wind projects in the UK and elsewhere in Northern Europe is not a lack of capital, but the perception of high risk by a largely inexperienced investor base, says Dima Rifai, chief executive of Paradigm Change Capital and finance track chair at EWEA Offshore 2013.

Rifai says that the major question is how to de-risk the offshore wind sector for a range of investor appetites, and that if this can be achieved, there are billions of dollars available — in contrast to a few years ago, when the sub-prime crisis had severely restricted capital.

“There are many investors interested in and looking at offshore wind, but due to the slow project pipeline, if even a portion of that comes through, we could be faced with too much capital chasing too few appropriate projects, particularly operational farms,” says Rifai.

She says that being able to properly assess and reduce risk is

linked to the evolving maturity of the offshore wind industry and companies involved.

“The experienced operational players in this sector have de-risked the process by building a significant business around offshore wind,” she says. “They understand the downside, they understand contingency and have some operational control should things go wrong. So with such parties it’s a calculated risk.”

Delays to financing decisions on big offshore projects is equally related to the relative inexperience of some parties.

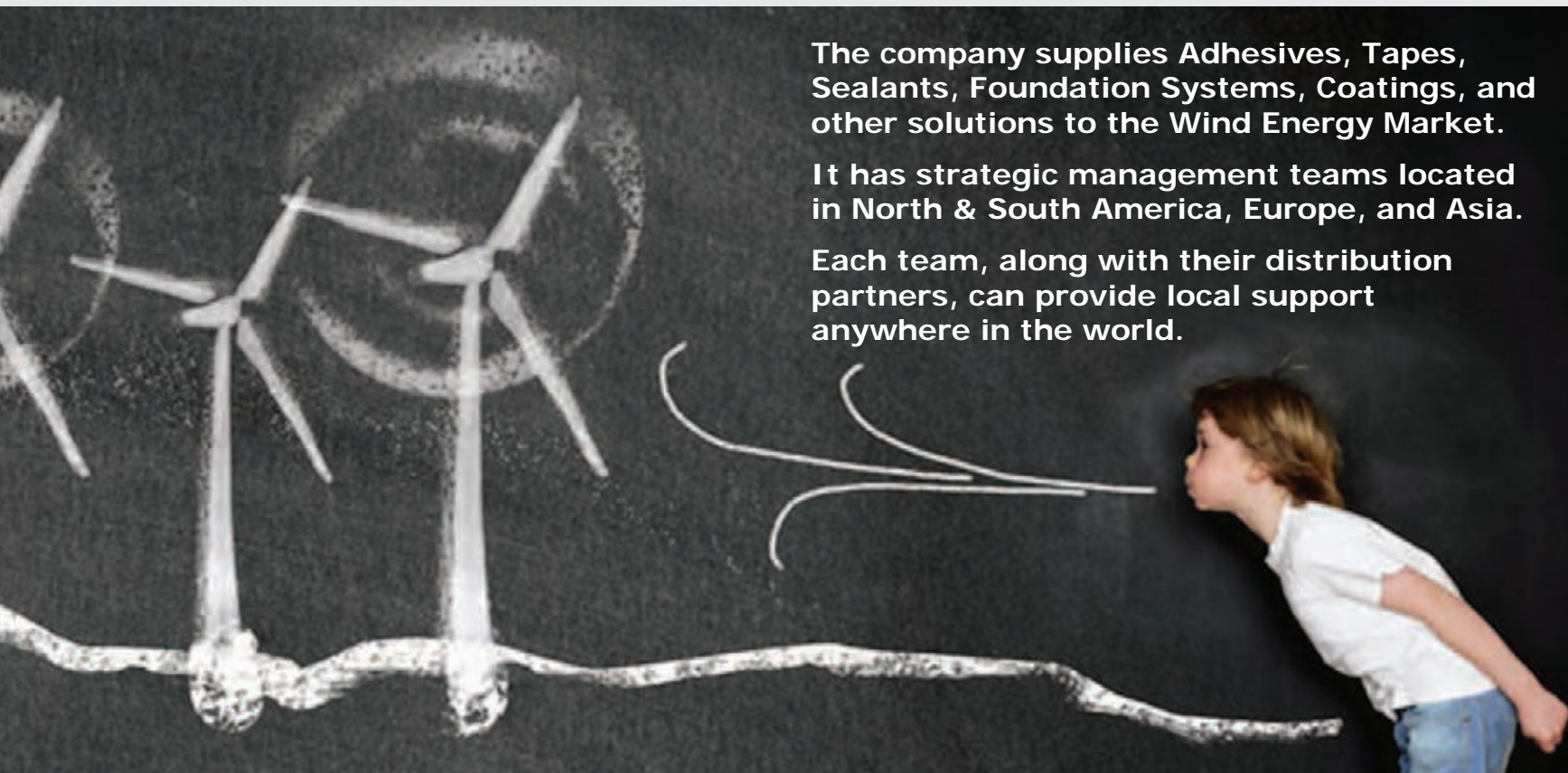
“If you are experienced then you know the bandwidth for costs and time, so if things don’t go exactly to plan, you have ways of mitigating your risk,” she says. “But if you don’t have a good handle on the process, then every little bump appears a serious hurdle and causes delays.”

She calls offshore wind “a complex space with many moving parts and with significant interface risks”.

“It’s best to know what you are



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'A COMPLEX SPACE':
Dima Rifai

doing or there's a higher chance of losing money," she adds.

Rifai says that participants in offshore wind will eventually "settle in" to the UK's new Contract for Difference support mechanism, just as they did with the former system of Renewables Obligation Certificates.

She notes the new system has significant advantages and favours a long-term reduction in consumer costs, while providing adequate opportunities for generators.

"The smart investors will do the work to get their heads around it and take advantage of the premium the government is offering early movers, because they too have a lot riding on its success. It may not be an entirely smooth ride, but the political will is there to make it happen," she says.

Rifai says that there is no "silver bullet" for de-risking offshore wind. "What we need are many incremental improvements, nurturing the breadth and depth of companies' experience to

handle the bigger investments coming," she says.

Getting financial investors into the sector is not just about investing in projects, she says, noting that with its recent €1bn (\$1.35bn) investment in Dong, Goldman Sachs has effectively "taken significant offshore development risk". It is also about investing in supply-chain companies such as installation vessel provider SeaJacks, which has seen investment from Riverstone and Marubeni.

Rifai is confident that the sector will see large amounts of investment from players such as sovereign wealth funds and capital-rich countries like Japan and China.

However, she points out that there is a big difference between Japanese and Chinese investors willing to take higher risks in order to gain experience in offshore wind, and a pension fund making a purely financial investment, whose primary concern is preserving pensioners' savings. □

Photograph | IJSD

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Happening today

The Next Boom: New Market Opportunities in Europe

09:00 - 10:30 (Panorama 1)

Discover the specific operating conditions in different markets and what impact they have on cost-effective electricity production. What do investors think about these markets? What are they looking for? What do we have? What do we need?

Finance sessions

Financing is one of the key issues for the offshore wind industry. Where will the money come from to build new offshore projects, as well as the grids, ports and vessels needed to make them operational? For the first time, we're including a dedicated financing track, designed by finance specialists,

to examine the impact of the regulatory environment and explore how the sector can attract investors.

Delivering Grid Connections on Time: Dealing with Transmission Risk

09:00 - 10:30 (Panorama 3)

Understanding, Quantifying & Pricing Offshore Wind Generation Risk

11:00 - 12:30 (Panorama 3)

Financing Offshore Wind Projects: Whose Risk is it in the Capital Structure?

14:00 - 15:30 (Panorama 3)

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Poster reception: one-to-ones with the experts

17:30 - 19:00 (Poster area)

- Hundreds of poster presentations covering the entire spectrum of track topics can be viewed during the event in the poster area
- Designed to facilitate information sharing and networking between participants and poster presenters



Side events and workshops

Maryland workshop & networking lunch

13:00 - 14:00 (Room Facette, Hall 3 via west)

Get an overview of how Maryland's policy works and how its comprehensive strategy offers a path forward and early access to North America's promising offshore clean energy future. Lunch included.

Franco-German Offshore Wind Opportunities Workshops

14:00 - 19:00 (Room Kontrast, Hall 3)

The French Wind Energy Association (FEE) and the French-German Office for Renewable Energies are organising a two-part workshop on the challenges and opportunities in the French and German wind industry.

Followed by a networking reception.

RES welcome drinks

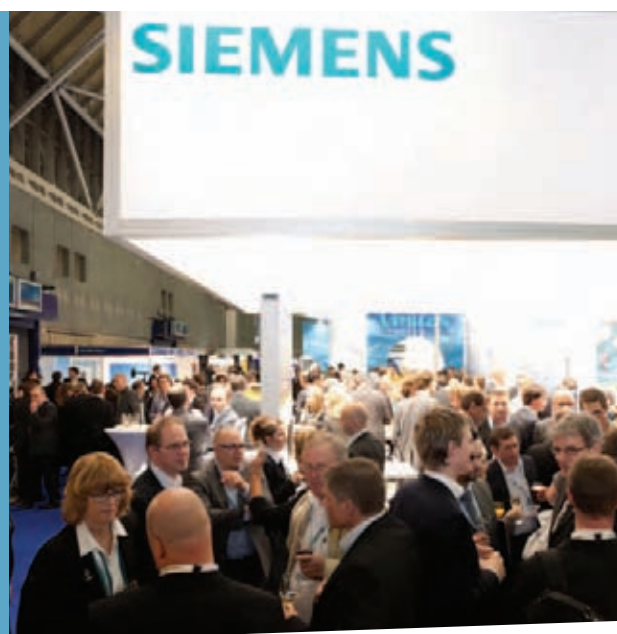
16:00 - 17:00 (stand 30C24)

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Siemens stand party

17:00 - 18:30 (stand 31C40)

Join Michael Hannibal, CEO of Offshore EMEA Siemens Wind Power, and the Siemens team on their stand and catch up with colleagues over a drink.



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Announcement of the first Offshore Comparative Resource and Energy Yield Assessment Procedure exercise (CREYAP) during the session:

Offshore Energy Yield Assessments: Challenges and Lessons Learned:

09:00 - 10:30 (Panorama 2)

Careers day

• **Employment and training seminar:** 9:00-10:30 (Room Kontrast, Hall 3 via east)

• **Presentation of the Ten Most Wanted Profiles in the Offshore Wind Industry**


• **Matchmaking and HR advisory services**

10:00-15:00 (Restaurant Trilogie, Hall 3.1)





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Europe's built-in offshore edge over British ports

KARL-ERIK STROMSTA

British ports suffer a significant disadvantage in winning North Sea offshore wind work, despite government efforts to level the playing field, an expert points out.

With final investment decisions on big projects such as Green Port Hull and Able Marine Energy Park still on hold, the UK government unveiled its Offshore Wind Industrial Strategy last summer.

But the strategy elicited neither investment decisions nor much enthusiasm from the industry.

The truth, says Chris Willow, senior associate at London-based

consultancy BVG Associates, is that the government has little leverage, given that it does not own the country's ports and harbours, or the land they sit on.

That is different from many European countries, and it goes a long way towards explaining why the offshore wind supply chain has been quicker to set up shop in Germany, France, Denmark, Belgium and the Netherlands.

Uncertainties surrounding the future offshore market are largely the same for port owners around the North Sea, Willow notes.

The reason ports such as Bremerhaven in Germany, Vlissingen in the Netherlands and Ostend in Belgium can move



FOURTH FACTOR:
Chris Willow

forward with "speculative investment", while ports in the UK cannot, is "because they have a fourth factor they can take into account — socioeconomic impact", Willow says. "They're quite open about this."

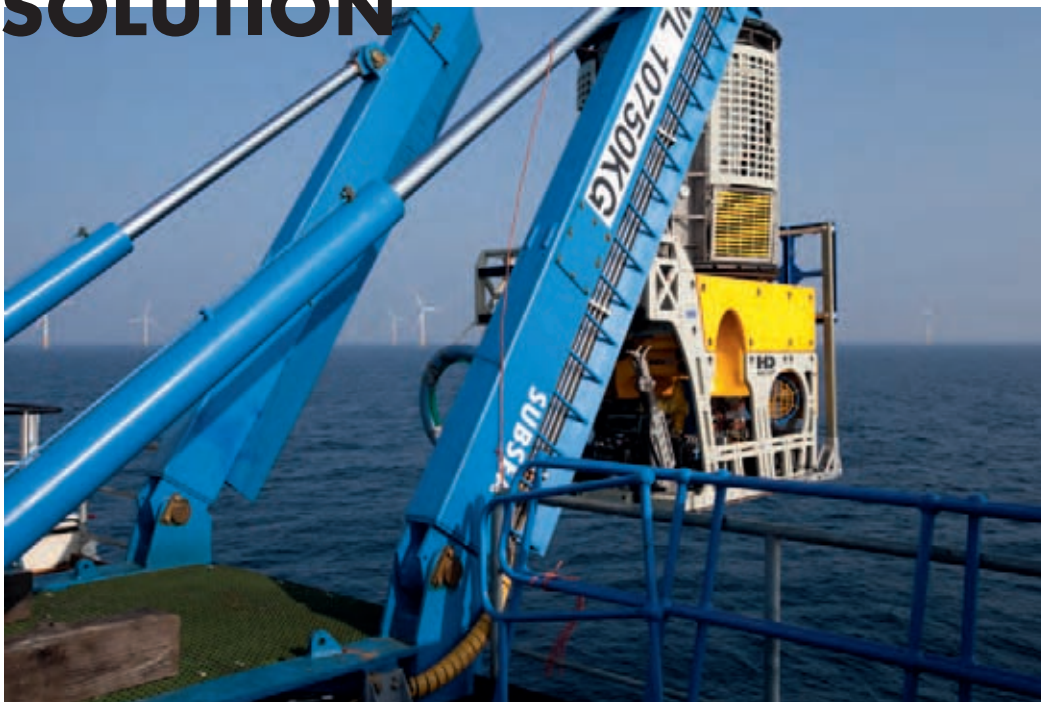
Publicly owned ports on the

continent often have access to cheaper money than private UK ports, and they don't have meddlesome shareholders to appease. "That means they can invest on rates and terms that wouldn't be acceptable to private business," says Willow. □

Photograph | BVG Associates

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ICE QUEEN:
The *Victoria Mathias* is on the market less than 20 months after RWE Innogy took delivery of the €100m installation vessel

‘8MW is the vessel limit’

KARL-ERIK STROMSTA

Installation vessels will be the key bottleneck in scaling up offshore turbines any further, with Vestas’ planned 8MW V164 model at the outer range of what is feasible, according to an expert. “I think the predominant technology will hover around 4-6MW,” says Rob van Basten Batenburg, managing director of the Marwin Group, a London-based renewables consultancy. “The incremental cost of building ships that could deal with a 10MW turbine, for example, is so enormous that you price yourself out of the

Photograph | RWE

market if you’re at that level of technology.” Over the next few years, Europe will lock in the vessels and maritime infrastructure it needs for the next generation of offshore wind farms, in effect capping the size of future turbines, van Basten Batenburg believes. Even if it were economically feasible to build vessels capable of installing giant turbines, the reality is that the offshore market is already starting to suffer from “a little bit of an overcapacity” of installation vessels. This is a huge shift from a few years ago, when the lack of installation vessels was seen as a

critical pinch point for the industry. In response, several players began investing in new vessels, resulting in a steady stream now coming onto the market. Last month, *Recharge* revealed that RWE Innogy has decided to sell its two offshore wind installation vessels, the *Friedrich Ernestine* and *Victoria Mathias*, underscoring the shifting market mentality. Those vessels, costing €100m (\$134m) apiece, and delivered only last year from a shipyard in South Korea, are two of the few currently operating in Europe capable of lifting 6MW turbines. □

Group tackles anchor issue

DARIUS SNIECKUS

Deltaris is spearheading a joint industry project, Safetrench, to tackle the risk of damage to Europe’s network of offshore communications lines by anchors dragged by ships. The cost in lost revenue to cable owners and public services in the unlikely event of such an accident would run into millions of euros. Safetrench brings together offshore cable network operators, designers, contractors and insurers, as well as supply-chain companies from the offshore oil and gas industry.

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Holmenkollen | 2014

Recharge, the global source for information on the renewable-energy industry, is inviting expressions of interest for its annual **Thought Leaders summit**, the first of which will take place on 9 January 2014.

The event, called simply Holmenkollen 2014, will be held at the prestigious **Holmenkollen Park Hotel Rica**, in the hills above Oslo, and is set to become a key event in the diaries of decision makers in the renewable energy industry.

Limited sponsorship packages for Holmenkollen 2014 are now available for leading companies that seek high brand visibility and credibility towards this highly prestigious industry target audience.

Involvement in the event will give sponsors the opportunity to engage with a unique group of high level opinion makers that are shaping debate and the future direction of the industry. Members of the **Thought Leaders Club** include the CEOs of developers, utilities and equipment suppliers, as well as policy makers, industry bodies and investors. The invited participants have been chosen on the basis of their ability to bring creative ideas to the table and engage with the latest trends.

Supporting the event as a sponsor will allow you to form a close association with an event that will play a significant role in setting the agenda for the industry for the year ahead and show that your company is engaged with cutting edge ideas and debate.

Participants will be able to take part in off-the-record discussions with industry peers and policymakers, as well as take part in winter sports activities. Sponsors will also be given the chance to host private meetings within the context of the event. In the evening, we will host the annual Thought Leaders dinner, with top-level keynote speakers.

The 100-year-old Holmenkollen Park Hotel Rica has been the scene of international peace talks and is located next to Oslo's Holmenkolbakken ski jump and the Norwegian Royal Lodge. Featuring a rich architectural heritage and modern conference facilities, the hotel will be an ideal environment for top renewables professionals and investors to consider the challenges of the year ahead.



Scan me for the latest information on the event

For further information regarding our limited sponsorship packages on offer for this unique event, please contact Commercial Director **Angelo Iannelli** on +47 51 93 97 82 or email angelo.iannelli@rechargenews.com

RECHARGE

REpower unveils new 6.2MW machine



SEA SIMULATION:
Computer-generated wind farm of 6.2M152s

DARIUS SNEECKUS

REpower has unveiled its largest ever offshore turbine, the 6.2M152. The 6.2MW 152-metre-rotor model, an upscaled version of the 6M126, is calculated to be capable

of boosting the energy yield of its predecessor by up to 20% at wind speeds of 9.5 metres per second. Designed for construction with a hub height of between 95 and 110 metres, the 6.2M152 will feature 74.5-metre glass-fibre-reinforced plastic blades

powering a three-stage gearbox and asynchronous double-fed generator. "We are the only manufacturer to have already installed more than 100 offshore turbines in the multi-megawatt class," states REpower chief executive Andreas

Nauen. "With an eye on the outstanding availability and energy yield of the REpower 6M126, we have enhanced this robust, proven concept: the bigger rotor and correspondingly larger drivetrain of REpower 6.2M152, combined with tried-and-tested, first-class technology, enables our customers to generate energy even more cost efficiently on the high seas."

The prototype of the 6.2M152 has been sold to an undisclosed buyer, which plans to install it at an onshore site in northern Germany next year with a hub height of 124 metres. The model will enter commercial production in 2015.

The 6M126, which has a swept area of almost 12,500 square metres, has been installed onshore at Germany's Ellhöft and offshore at Belgium's Thornton Bank 2 and 3.

REpower, which is majority-owned by Indian turbine maker Suzlon, announced last month that it will change its name to Senvion next year. □

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2014

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World Smart Energy Week 2014 is a group of the world's leading B2B trade shows covering a wide range of smart/renewable energy. From power generation, energy storage, energy distribution to smart/renewable energy related applications and technologies.

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Recharge is proud to be chosen by Reed Exhibitions Japan Ltd as the producer of the official World Smart Energy Week 2014 show news dailies. *Recharge* has become renowned for producing high quality and informative official show dailies at leading international renewable energy industry events. Our recipe for success has been to mix local editorial coverage of the show in question with high quality breaking industry news from around the world.

Whether you want to alert participants to your booth number, build brand awareness, strengthen your company profile, buy or sell goods and services or recruit professionals – the World Smart Energy Week 2014 official show dailies produced by *Recharge* will get your message across to all visitors, conference delegates and exhibitors alike.

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RECHARGE

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WIND EXPO 2014

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BATTERY JAPAN

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10th Int'l Hydrogen & Fuel Cell Expo
FC EXPO 2014

5th **Processing Technology Expo**
ENETECH JAPAN

7th Int'l Photovoltaic Power Generation Expo
PV EXPO 2014

6th Int'l Photovoltaic Power Generation System Expo
PV SYSTEM EXPO



TAKING THE PLUNGE: Concrete foundations being installed at Rødsand 2

E.ON sells 80% of Rødsand 2 to Danish energy company

BERND RADOWITZ

German utility E.ON has agreed to sell an 80% stake in its 207MW Rødsand 2 offshore wind farm to Danish energy firm SEAS-NVE. The transaction values the wind farm off the Danish island of Lolland at DKr3.5bn (\$629m). Total cash proceeds for E.ON will be DKr3.2bn (\$575m).

E.ON will keep a 20% stake in the wind farm and will remain its operator for its remaining lifetime.

“Following on from last year’s deal with PensionDanmark, we are once again delivering on our strategy of ‘more value, less capital,’” says E.ON chief financial officer Klaus Schäfer.

“For E.ON, the sale of a majority stake in one of our

largest offshore wind farms will successfully recycle our capital, ensuring we are able to realise more of our excellent renewables pipeline.”

Rødsand 2 was inaugurated in August 2010 with 90 Siemens 2.3MW turbines.

The final transaction is subject to regulatory approval from the Danish energy agency and the EU. ☐

The Switch’s 8.6MW PMG set for load tests

DARIUS SNIECKUS

The Switch has completed a “no-load” run of its giant 8.6MW permanent-magnet generator (PMG) for use offshore, clearing the way for full-load tests to start this month.

The medium-speed, rear-mounted PMG design combines low- and high-speed technology for high availability and reliability that boosts total energy output, particularly in partial loads created by turbulent offshore winds.

“This latest PMG is bigger, better and stronger than anything built by The Switch so far,” says chief executive Jukka-Pekka Mäkinen.

Built around a segmented structure to give easier access to mechanical and electrical parts for maintenance, the 27-tonne PMG, which is 2.2 metres long and 3.3 metres in diameter, uses only 10% of the magnets needed for a direct-drive generator of the same power rating.

It also features a high-specification, full-power

liquid-cooled converter designed to extend the system’s life in hostile offshore environments.

“The Switch was born offshore, starting with an offshore turbine project for the Hundhammerfjellet wind farm in Norway back in 2003. The learnings from eight years of field experience have been brought into our new designs,” says Mäkinen.

The Finnish PMG manufacturer claims efficiencies that exceed 97% for the new 8.6MW model. ☐

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Photos of the day

1) EWEA chief executive Thomas Becker addressing yesterday's opening session; 2) The Christmas-inspired Fugro booth; 3) A worker at the RentOcean (formerly Oceanteam) stand; 4) Executives enjoy a drink at REpower's stand party; 5) EWEA president Andrew Garrad speaking yesterday; 6) Siemens Wind Power chief technical officer Henrik Stiesdal appearing at the high-level panel yesterday afternoon

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