# EWEAOFESH Produced by **RECHARGE**

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### E.ON is read the reap rewards

German utility will put its experience to good use in Europe's next generation of offshore wind farms, writes Ben Backwell

.ON has a proven record of delivering offshore wind farms — the largest being Robin Rigg, Rødsand and London Array - and has made steady progress in standardising the construction of projects.

Now it is looking at how to apply the lessons for a next generation of projects, says Michael Lewis, chief operating officer for wind at E.ON Climate & Renewables.

"We have completed a number of large projects and have been able to standardise certain elements of what we are doing, integrate our projects and make sure standard learnings are being applied," he tells Recharge.

For instance, the vessel agreement signed with MPI Offshore in 2011 has allowed the German utility to plan long-term project timelines that have linked the construction of different wind farms. It has also gained valuable

### Being able to do a number of projects continuously has really helped to get continuity and standardisation

experience of using the same turbines — such as the Siemens 3.6MW and the Vestas 3MW

V112 — across different projects. "We have had the benefit of being able to do a number of projects continuously and in parallel that has really helped to get continuity and standardisation," he adds, but there is "some way to go" in terms of standardising the supply chain, and there are big differences in national regulations, particularly regarding offshore substations.



Once E.ON has completed the Humber and Amrumbank wind farms in 2015, it will be looking at the next generation of projects, potentially using 5-6MW turbines. "We are trying to extract all the learnings we can before we move up to the next generation," says Lewis, and there will be an element of "retooling" to adapt to bigger turbines, including in foundations, logistics and with vessels that may no longer be suitable.

This month, E.ON announced the sale of an 80% stake in Rödsand 2 to Danish energy company SEAS-NVE for €430m (\$580m). This transaction represents a major step in its

strategy of "less capital, more value", and the funds will be recycled into future project investment opportunities. The first big project in the

Continued on page 3



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#### **BERND RADOWITZ**

n a move that will have huge repercussions for the entire wind industry, Germany's incoming government seems determined to drastically lower its target for offshore wind.

Environment minister Peter Altmaier, of the Christian Democrats (CDU), and Hannelore Kraft, the Social Democrats' (SPD) representative in coalition talks on the energy policy of a future government, have agreed to a preliminary version of this section of the coalition contract.

This version, seen by *Recharge*, lowers national offshore wind targets to 6.5GW in 2020 and 15GW in 2030 — a big step down from current targets of 10GW by 2020 and 25GW by 2030.

The text acknowledges that "lengthy forward planning" is needed for offshore projects and that upcoming investments should not be put at risk. But the necessary measures to avoid such a risk still need to be agreed by the coalition negotiators, leading to considerable unease in the energy industry.

Frank Mastiaux, chief executive of Germany's third-largest utility, EnBW, was so upset that he took the unusual step of interfering directly in the talks, writing to Altmaier and Kraft.

Because of the huge investments needed, the cuts to the offshore target will "very likely result in a collapse of the appropriate expansion efforts", the letter German offshore target cut could cause 'collapse'

GOOD POINT: Peter Altmaier and

annelore Kraft

warns. Utilities, banks and other investors are waiting for a firm commitment to offshore wind by the incoming government before putting forward the large amounts of money that are needed for offshore projects. Late last year, EnBW put on

hold a final investment decision of more than €1.5bn (\$2bn) for its 500MW Hohe See project in the North Sea. The company cited, among other things, regulatory

#### **Coalition talks**

Angela Merkel's CDU, her Bavarian ally, the Christian Social Union, and the SPD are in negotiations to form a new government. The talks may drag on into December, and the formation of a coalition would still need the approval of SPD members in a party referendum next month. uncertainty, which has hardly lessened since then, given the planned cuts to targets and wavering support for offshore by the incoming administration.

In August, EnBW began the "hot phase" of construction at its 288MW Baltic 2 offshore project, starting to install 80 subsea foundations. It already operates the 48MW Baltic 1 offshore wind park, which has been supplying power to the grid since 2011.

### E.ON applies lessons to next generation of projects

#### From page 1

2016-17 time frame is the 700MW Rampion off southeast England, where E.ON is on course to make a final investment decision next year. It is the smallest of the UK's Round 3 projects, but is still bigger than London Array phase 1, the world's biggest wind farm so far.

The company is also developing projects in the German North Sea and the Baltic, and is closely following the development of the Danish tender system. Lewis urges turbine suppliers such as Siemens and Vestas to pursue plans to set up British factories. "It makes sense to locate where the greatest market potential is, and that remains the UK. Turbine suppliers need to make significant further progress to reduce their costs and prices, and I would have thought this means being close to the market."

Manufacturers also realise it is important that the UK sees "tangible benefits" from offshore wind in investment and jobs. Lewis emphasises that E.ON is driven by cost reduction and is "fully on board" with the UK government offshore target of £100 (\$161) per MWh. "We don't want to sit here harvesting subsidies for ever," he says. "We are about making this technology commercially competitive to build a long-term future for the industry.

"The political noise in the UK is a distraction, but hopefully that will die down once it is clear how much progress we are making.

"[Electricity Market Reform] is a good thing. We have clear strike prices. These will evolve towards a competitive system where strike prices are decided by auction and we can develop the best projects for the best prices."

In Germany, the shape of continued support for offshore wind is far from defined, and Lewis says current discussions are not conducive to investments that require years of planning.

On the other hand, grid problems are easing and the changes announced last December on liability have been "very helpful".

2

## Plea to keep FIT compression model

#### **BERND RADOWITZ**

ermany's offshore wind industry is urging the leaders of talks about future government energy policy to include a firm commitment to support the sector.

The industry wants a volumebased extension to Germany's "compression model" for offshore feed-in tariffs (FITs) under which wind farm operators can opt to receive a higher FIT of €0.19 (\$0.26) per kWh in the first eight years of operation, before reverting to a lower-than-normal FIT of €0.035 for the next 12 years.

"A fast regulation to extend the

compression model would take

away investor insecurity," says Ronny Meyer, managing director

of offshore wind group WAB.

"Only then will investors be

willing to spend." Most developers and operators have chosen the compression model to meet elevated upfront investment costs. But under the current regime, only projects onstream by the end of 2017 will get the higher initial FIT under the compression model.

Most investors fear that projects now reaching financial

We're not unhappy with 6.5GW if, for those 6.5GW, the compression model will be extended

close may not be in a position to profit from the compression model, as they might not be able to meet the 2017 deadline, given lengthy construction times and grid connection delays.

WAB and a group of offshore

operators, such as Dong Energy, EnBW, E.ON and Stadtwerke München, are proposing an extension that would still enable projects of up to 6.5GW to opt for the compression model, as long as they have received a binding allocation of grid



capacity by the federal network agency before 2017. Such an allocation is seen as a prerequisite for a final investment decision (FID).

WAB originally had an 8.5GW cap in mind, but the coalition

energy negotiators have unexpectedly agreed to lower the national 2020 offshore wind target to 6.5GW, down from the 10GW envisaged earlier.

"We're not unhappy with 6.5GW if, for those 6.5GW, the compression model will be extended," Meyer says.

Investors have held back FIDs this year, waiting for a firm commitment to offshore wind.

An exception is Dong. On Monday, it announced the FID for Gode Wind 1 and 2, as their grid connection will be via a transmission link cluster that is already being built by transmission system operator TenneT.

Environment minister Peter Altmaier is likely to regard any proposal that could mean higher overall FIT payments in the short run with critical eyes. He has made it clear that he wants support for renewables to be reigned in.  $\square$ 





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# New push for green power links

#### **CHRISTOPHER HOPSON**

ritain's National Grid is stepping up efforts to convince the government to increase the number of clean-power interconnection links to other countries.

The grid operator believes these interconnectors can head off future power shortages and help the UK become a European electricity hub.

"The need for more interconnection to the UK has come to the fore, and there is value in moving these projects forward," says Paul Johnson, head of European business development at National Grid. "We feel there is now the political will in the UK to see these types of projects move forward.

"These days we are looking at all the opportunities we can to bring other power sources into the... grid system. With the UK's power demand ranging from 50-70GW in a typical day, we feel interconnection is probably our best way forward."

Britain meets less than 5% of its peak electricity demand through interconnection. The EU proposes that the proportion should be about 10%. "We will have to go for some very costly interconnections to achieve that figure," says Johnson.



The UK has two interconnectors, linked to France and the Netherlands. "We also need to tap into new sources of renewable energy and are actively looking at new interconnectors to France and Belgium," Johnson adds. "At present we have shorter links to the south of the UK.

We also need to tap into new sources of renewable energy and are actively looking at interconnectors to France and Belgium

When you move to the UK's northern shores, then you are looking at links to Denmark, Norway, Iceland and Ireland essentially tapping into a large demand pool in the UK and beyond, into the European market."

This month, Iceland's president, Ólafur Ragnar Grímsson, called

for "hard-headed analysis" of the viability of constructing a  $\pounds 4.3$ bn (\$ 6.87bn) subsea cable to flow clean power from his country to Britain. The ambitious 1,000km cable

> CG booth 31 B 80

 the longest in the world would draw on Iceland's hydro, geothermal and wind resources.

"From a technology point of view, there have been major advances in recent years in HVDC technology," says Johnson. "But we need to bring outside financial investment into these interconnection projects to make them a reality."

The two governments have been examining proposals for a cable since signing a memorandum of understanding in May 2012. 🖬

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### Industry mobilises behind ambitious 2030 green targets

#### **CHRISTOPHER HOPSON**

urope's renewables leaders will mount a campaign backing ambitious 2030 targets that they hope governments will adopt next March.

Stephane Bourgeois, head of regulatory affairs at EWEA, tells *Recharge* that the European Commission will draft a white paper with detailed proposals, likely to be published in January.

The wind industry is expressing quiet confidence that it will win its arguments on legally binding 2030 targets, but it acknowledges that big obstacles lie in the way. "Everyone in the wind industry is worried about 2030 targets. It's the issue of the moment and people can't talk about anything else," says Bourgeois.

"It makes sense to drive renewable energy with 2030 targets, which combine economic growth with climate change mitigation. The commission itself has called it a 'no regrets option', along with energy efficiency and infrastructure."

EWEA says the current binding targets for 2020, introduced in 2009, have worked well in moving the sector forward, boosting jobs and exports while cutting greenhouse gas emissions.



A group of eight top European energy companies — Acciona, Alstom, Dong, EnBW, ERG, Gamesa, RES and Vestas — have called on the EU to come out with a strong 2030 framework. They warn that the sector has long investment cycles and needs as much policy certainty as possible.

It follows a similar call from the European Renewable Energy Council, together with 67 companies and associations, in a letter to the European Parliament.

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# Becker comes out fighting over oil and gas subsidies

The EU is heading in the right direction to reform the energy market, the EWEA boss tells **Christopher Hopson** — but it needs to move faster homas Becker wants the EU to end fossil-fuel and nuclear subsidies now. It's an ambitious hope, but the chief executive of the European Wind Energy Association (EWEA) believes the tide may finally be turning in his favour.

He points to the recent findings of a UK think-tank that shows how fossil-fuel subsidies distort the price of carbon and favour the rich elite in the developing world.

"This report draws welcome attention to the streams of money poured into the laps of coal, oil and gas producers around the world," says Becker. "It is another sign researchers are finally waking up to the fact that global energy markets are massively distorted by huge subsidies paid to fossil fuels and nuclear."

The Overseas Development Institute (ODI) study shows how fossil-fuel producers are receiving more than \$500bn a year in government subsidies, dwarfing the amount spent on green inventives. The ODI says the richest countries are spending six times more on supporting coal, oil and gas than they are on helping poorer nations fight climate change, and it calls on the G20 nations to phase out such payments by 2020.

Talking to *Recharge*, Becker is in combative form. "Why should European taxpayers continue to have their hard-earned money thrown at power plants which pollute the air they breathe, whose expensive fuel supply depends on the goodwill of Russia or Algeria, or which — in the case of nuclear — comprise risks so huge it makes the mind boggle?

"Let's pay heed to reports such as this and its message: removing fossil-fuel and nuclear subsidies will help to establish a fairer energy market, boost renewables, help tackle climate change and create green jobs around the world."

Becker says the European Commission (EC) has taken a big step in the right direction by announcing that it will launch a study into energy subsidies in the EU. "A bigger and more





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effective step would be for the commission to put an end to fossil-fuel and nuclear subsidies now," he comments.

EU energy commissioner Günther Oettinger says the EC is going to carry out in-depth studies so that by late spring 2014 it has a complete overview of energy prices and subsidies.

"I want to know which subsidies existed in the past, and which still exist for nuclear energy, fossil fuels and renewables," Oettinger says.

"I think there needs to be full calculation of costs because we want to take more cost-efficient decisions in the future."

This month, the EU said it wanted to see renewables incentives tied more firmly to power price movements. In its latest guidance on state subsidies in the electricity sector, it says it wants the market, rather than government guarantees, to be the prime driver of wind, solar and other renewable sources.

In a statement on the guidance — which could help determine whether national governments are within future EU state-aid rules — the EC said "in practical terms" this would mean feed-in tariffs being replaced by feed-in premiums, with the incentive

Removing fossil-fuel and nuclear subsidies will help establish a fairer energy market and boost renewables

element rising or falling with power prices.

The EC favours auctions to allocate renewables generation to the lowest bidder, which it says would make the cost of production more transparent and lead to renewable sources battling it out between themselves. It also wants to see incentives disappear as soon as technologies are able to stand on their own feet. 🖬



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### Happening today

**Event launch & high-level plenary:** 2030 Targets — the Magic Number? 10:00 - 12:00 (Panorama 1 & 2) With 2020 climate and energy targets looming large, and the 2050 climate goal still a long way off, political attention is turning to the period up to 2030. The EU's energy future is top of the agenda for European decision makers, but consensus still needs to be reached on what form it should take. Heads of state will discuss the issue of 2030 climate and energy targets affecting the entire renewable energy sector at the Spring Summit in March 2014. EU member states are setting out their positions and priorities for the 2030 Climate

and Energy package. What do these positions mean for the wind industry? Can binding renewables targets be part of the mix? Should low-carbon objectives take precedence? Where does energy-efficiency fit? Leading decision makers from across Europe share their views on a debate that will have an enormous impact on the wind industry.

### High-level panel: Is Offshore Wind Worth the Money?

**14:00 - 15:30 (Panorama 1)** While offshore wind is currently more expensive than other technologies and requires significant investment and public support, it has enormous potential for growth and job creation. As such, it symbolises the competitiveness debate in Europe today. Should Europe go offshore as fast as possible to bring down costs and reap the macro-economic benefits, or should it focus on the cheapest technologies and control electricity price increases?

Conference sessions are open only to conference delegates. If you are not a conference delegate, you can still attend conference sessions by purchasing an access pass for individual sessions. Speak to registration staff for more details.



#### Workshops

#### UK Offshore Wind Market Development workshop 12:30 - 16:00 (Room Facette, Hall 3 via west)

The workshop will be of interest to developers, OEMs and service providers alike seeking to put the UK's progress into perspective against wider EU programmes. There will be an opportunity to address technical and legislative experts individually and hear first-hand how you make the most out of the unique UK market.

#### EU Project: Design Tool for Offshore Wind Farm Clusters

16:00 - 18:00 (Room Substanz 1 & 2, Forum, level C) EERA-DTOC is a EU (FP7) funded project that aims to design a robust modelling tool to better plan offshore wind farms so that they produce as much power as possible.

Developers, strategic planners, wind farm operators and others in the wind industry will be able to use the tool given the unique advantages it is set to bring to the planning process. Speakers from DTU Wind Energy, Fraunhofer, CENER and ECN will provide participants with the latest intermediary findings, explain the main steps during the development stages, and reveal how the tool will be tested.

#### **REpower stand party**

**16:30 - 18:00 (Stand 31D10)** REpower Systems SE (a Suzlon group company), one of the world's leading manufacturers of onshore and offshore wind turbines, invites you to enjoy a drink at their stand. Big news expected!

#### Opening reception – Get a taste of Denmark!

18:00 - 20:00 (Danish Pavilion, Hall 3) Denmark, global leader in offshore wind energy, invites you to join the EWEA Offshore 2013 opening reception at the Danish Pavilion. Don't miss the opportunity to enjoy a taste of Denmark and network with the Danish delegation prior to Copenhagen hosting EWEA Offshore in March 2015.

### Don't miss out tomorrow

#### The Next Boom: New Market Opportunities in Europe 09:00 - 10:30 (Panorama 1)

In challenging times, the wind industry always needs to be on the lookout for new opportunities for growth. This session examines new market opportunities in the Baltic Sea region and other emerging offshore wind energy markets, including the Atlantic, Mediterranean and Black Sea regions. Learn about the energy outlook for each of these markets and get a more detailed analysis of each region:

- What are the specific operating conditions in these markets and what impact do they have on costeffective 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.

Collect your copy of the new EWEA publication, *Where's the Money Coming From? Financing Offshore Wind Farms*, at the EWEA stand (31C100)

- Printed copies of the full report are available to EWEA members
- Come and chat to EWEA staff and discover the benefits of becoming an EWEA member

#### 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
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IN DEMAND: Lizhen Xu, above, is optimistic about jobs growth in the offshore wind industry

## Making offshore wind work for you

#### **CHRISTOPHER HOPSON**

he European offshore wind industry may be going through a lull — but it's an exciting time for skilled workers. Many companies are reporting skill shortages, and the recruitment and retention of qualified staff are a headache.

At the EWEA Offshore 2013 careers day on Thursday, headhunting and recruitment company Greenfish Consulting will present the results of a survey assessing recruitment trends.

It will identify the most wanted profiles, highlight the challenges faced by companies and help

recruiters meet candidates. To allow more participants to take part in the jobs survey, interviews will be carried out on the first two days of EWEA Offshore.

Preliminary findings from the Greenfish survey show that opportunities are predominantly in wind farm development, port refits and supply-chain manufacturing. Developers are recruiting project managers, business development managers, commercial/sales managers and project engineers.

There is growing demand for construction and operations managers too, as many projects are moving from the planning to

#### Most wanted

The top ten posts wind companies are looking to fill:

Senior offshore project manager

- Project and business development manager
- Electrical engineer
- Selectrical package manager
- Project manager (cables)
- Cables engineer
- (a) Offshore turbine service technician
- Senior engineer, steel structures
- **O**&M technician

Health, safety, environment and quality managers

construction phase. Another key trend is the increased need for qualified staff to integrate wind power into the network.

Greenfish senior project manager Lizhen Xu tells Recharge that despite the current slowdown, she remains optimistic about jobs growth in the industry.

She says there is a real will from companies, academic institutions and candidates to work together to ease skills gaps and shortages.

Greenfish says offshore wind is a concentrated market with a limited number of big players, so resolving the skills shortage is of paramount importance to sustaining growth. 🗈

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he International Energy Agency (IEA) warns that the world faces an "energy trilemma" as it battles to deliver security of supply, sustainability and economic prosperity.

The Paris-based watchdog says in its latest report that the world will probably need to source about 48% of its total electricity generation from renewables by 2035 if it is to meet international climate change.

The forecast suggests that the use of renewables will need to double from the "current policies" scenario if the world is to cap emissions at 450 parts per million.

IEA executive director Maria van der Hoeven underlines the need for governments and businesses to anticipate the need to adapt to rising energy prices, including carefully designing subsidies to support the development of new clean-energy capacity in the most costeffective manner.

"Major changes are emerging in the energy world in response to shifts in economic growth, efforts at decarbonisation and technological breakthroughs," she says.

"We have the tools to deal with such profound market change. Those that anticipate global energy developments successfully can derive an advantage, while those that do not risk taking poor policy and investment decisions."

The IEA's 2013 World Energy Outlook predicts that the global boom in clean-energy technologies will continue, with nearly half of the growth in new power capacity coming from wind and solar by 2035, the great majority of which will be built in China.

The agency predicts that China is likely to build more green power capacity than the EU, Japan and US combined over the period.

"Renewables are coming on very strongly as a new energy source and changing the global energy picture," says IEA chief economist Fatih Birol. "We see a major increase in the contribution made by renewable

energy, especially from China". The forecast suggests that the

use of renewable sources in

**Overtake gas, says IEA** China is predicted to build more green power than the US, EU and Japan combined by 2035, reports **Christopher Hopson** 

Renewables poised to

world electricity supply will rise to almost 31% in that period, "drawing ahead of natural gas in the next few years and all but reaching coal as the leading fuel for power generation in 2035".

Most of the increase will come from wind and solar, which will boost their share of total generation to 18% by 2035, although hydropower will still make up 50% of renewables. ☑





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### Dong returning for the latest FLiDAR version

#### DARIUS SNIECKUS

ong Energy has plumped for the latest version of Belgian outfit FLiDAR's floating wind measurement device.

The Danish developer has been putting an earlier version of the technology through its paces at a site in the southeast Irish Sea, where in recent weeks it has measured gusts of more than 25 metres per second for long stretches, braving seven-metrehigh waves.

The new device, which integrates a range of upgrades and is powered by onboard micro-PV and wind technology, will be delivered in early March for a one-year measurement campaign in the Irish Sea. Dong would not confirm the location.

Dong's Hugh Yendole says the order demonstrates the company's "determination to make the most of new technologies to drive down the cost of electricity by providing even better information for our development and investment decisions".

The device was developed by the FLiDAR joint venture between renewables consultancy and software services provider 3E and Deme subsidiary Offshore & Wind Assistance. It is made up of a moored marine buoy fitted



with a Leosphere Windcube v2 Lidar (light detection and ranging) system that will collect and stream wind-speed data back to the developer. Floating Lidar is increasingly being seen as a commercial alternative to fixed meteorological masts for offshore wind measurements.

### **Recharge Thought Leaders VIP brunch** Next Steps for the German Offshore Wind Sector

#### 20 November, 10.30-11.30

This high-level debate at the EWEA Offshore 2013 conference will look at the current state of the German offshore wind market. It will look at the roll-out of key new technologies and infrastructure such as the giant offshore platforms using HVDC technology, and look at whether supply-chain bottlenecks are close to being resolved, following the serious hiatus the sector suffered last year.

It will look at whether new regulations have resolved key questions of liability over grid delays and assess the size of the sector's construction pipeline in the medium term. It will also look at how the changing political panorama post elections is affecting the sector.

#### Venue | EWEA Offshore 2013

Frankfurt Messe, Frankfurt | Room "FACETTE", Hall 3 via West Side

#### **Speakers**

Michael Lewis | Chief Operating Officer Wind Power, E.ON Climate & Renewables Europe Henrik Stiesdal | CTO, Siemens Wind Andrew Garrad | Founder, Garrad Hassan, President EWEA

For more information contact ben.backwell@rechargenews.com



#### **DARIUS SNIECKUS**

he National Renewable Energy Centre (Narec) is on track to finalise a deal early next year to install the first turbines on its 99.9MW demonstration project off northeast England.

The £350m (\$560m) Blyth Offshore Wind Demonstration Site (Bowds) — one of several proving grounds on the cards at the UK Crown Estate for next-generation turbine, jacket and supporting offshore technologies — is laid out for three five-machine "pods" in water depths of 35, 45 and 55 metres.

Narec, which is about to carry out further geotechnical works to investigate seabed conditions at the grid-connected site, hopes to have the two shallower arrays built by 2015-16, with build-out of the deepest row to follow.

"We have the marine licence, a connection agreement [and] planning permission for the substation, and the land agreements for the cable route are well developed, so we're moving ahead apace," says operations director Tony Quinn.

A lead-off deal with one of a shortlist of OEMs "is actively being worked on", with the aim of signing up two companies to install and test a quintet of turbine models each. Narec's Crown Estate lease has been extended to the end of the year "until the full scope of the project is finalised", he notes.

"The industry has a greater appetite for 35-45 metres of water right now — the immediate needs of the first phase of UK Round 3. The outer



### Narec on track to install first Blyth turbines in new year

row, which is on the border of fixed and floating structures' water depths, is on a slightly longer timescale."

Plans last year to link up with an industrial consortium to develop Bowds — the largest UK site approved to test offshore turbines — were unsuccessful, but Narec is confident financing "will crystallise in the next three to six months".

"We're actively looking for investors in the site or potentially considering selling down our interests. All options are open," says Quinn.

Bowds was given a boost this

month by a deal with Mainstream Renewable Power to test a floating Lidar prototype from Flidar at the site, with plans to use the technology in developing the 450MW Neart na Gaoithe project off eastern Scotland.

"There is great demand for [Bowds] from the supply chain as well as the turbine makers to demonstrate new technologies and capabilities. Many have invested in huge machines and pieces of kit they need to trial in real offshore conditions.

"The utilities and developers are interested in procuring proven technology, so the real challenge is how we come together as an industry to build the turbines and the jackets and all the other necessary technology to make it economic, and so lower the cost of energy."

For Narec — which is putting a Samsung 7MW S-171-7.0 turbine drivetrain through its paces on its 15MW onshore test rig — the demonstration site will be the "final piece in the jigsaw" of its strategy to provide a complete suite of independent, open-access test facilities for manufacturers developing new offshore technologies for Round 3.



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#### **EWEA OFFSHORE 2013**

# Siemens predicts the end of the weld

#### **DARIUS SNIECKUS**

iemens is fine-tuning a design for a nextgeneration offshore wind turbine jacket that it aims to make 40% less expensive to install in 40 metres of water than a conventional monopile.

The industrialised four-legged trussed concept, which uses proprietary bolting technology rather than welding on its joins, is being engineered to be seven times quicker to build than existing models on the market.

Fabricating jackets for midrange water-depth projects currently takes about a week per piece. Siemens Wind Power chief technology officer Henrik Stiesdal reckons the company's foundation design could be built in a day.

"It is clear that as you move

into deeper waters, alternatives to the classical monopile are needed, and jackets are the obvious candidate — they can be made relatively lightweight and can be made relatively cheaply," he states. "But in real life, the practicalities of fabricating jackets tend to overshadow the benefits because shipyards can only do a jacket a week and we would need 20-odd shipyards in Europe building non-stop to meet the expected demand.

"We need to get away from the bottleneck-creating business of welding nodes if we are going start producing jackets at an industrial scale."

The Siemens bolted jacket is a steel quattropod that, from a distance, looks much like existing designs used on developments such as the UK's Beatrice demonstrator project and Germany's Alpha Ventus.

Where the concept sets itself apart from shipyard-assembled models is in the nodes — where the steel elements are joined to form the jacket.

"The wind industry has a long track record with bolted solutions onshore that has allowed us to assemble structures very quickly out in the field," notes Stiesdal. "Why can we not use some of that learning to make jackets that could be built in coastal factories and shipped out to offshore wind farms?"

Designed for water depths of 35-50 metres, the bolted jacket, being modular, could nonetheless be adapted to "go as deep as you want", only limited by the length of the jack-up installation vessel's legs. "The idea would be for manufacturers to build jackets not just for a given project but for a specific site on a project while serially producing them."

A prototype of the bolted jacket is on the cards to be built in the next year, with the hunt on for an offshore pilot site.

Siemens will first focus on development and demonstration of the new jacket before deciding whether to manufacture the substructure.

"Twenty-two years after the first wind farm offshore, we are not yet delivering a fully industrialised solution. Wind turbine manufacturers have been able to bring down the cost of their part, but the challenge is to bring down the cost of this sub-element and bring it onto the market."



# 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.





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### RECHARGE

#### **EWEA OFFSHORE 2013**

#### **CHRISTOPHER HOPSON**

N climate change talks face a new setback after Japan slashed its plans to reduce emissions from 25% to 3.8% by 2020, compared with their 2005 level.

UK energy and climate change secretary Ed Davey said the decision was "deeply disappointing" and at odds with the need to tackle global warming. He was still hopeful the UK and other members of the G8 economies could persuade Tokyo to change its mind.

However, Christiana Figueres, the UN's top climate official, said she understood the problems Japan faced following the closure of its nuclear power plants after the 2011 earthquake and tsunami.

"I do have some understanding that Japan has been hit by several catastrophes in the last few years. My hope is that Japan understands that investment in renewable energies galvanises investments and creates new jobs," Figueres said.

To compensate for its reduced emissions target, Japan intends to raise \$16bn by 2015 to help developing countries cut their greenhouse gases.

This aid package is thought to include supplying developing countries with green technologies developed by Japanese firms, including offshore wind turbines, fuel-cell vehicles and high-tech housing insulation. The Japanese announcement

Australian and Canadian leaders

greenhouse gas emissions in their

countries, and reluctance from

of policies aimed at reducing

follows open criticism by

Photograph | UN

PROBLEMS: Christiana Figueres at the opening of UN climate talks in Warsaw last week

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UNITED NATIONS CLIMATE CHANGE CONFERENCE COP19/CMP9 WARSAW 2013

# Japan setback at COP19

Europe and the US to aim for more ambitious emissions cuts.

The first week of talks between representatives of more than 190 countries at the COP19 conference in Warsaw were dominated by how and when the \$100bn promised to tackle the effects of climate change would be made available.

Major breakthroughts are not expected at the conference. Instead the talks have been described as sessions that will lay the foundations for a global agreement to be reached in time for 2015 talks in Paris.

#### **Burning issue**

Christiana Figueres told a major coal industry summit in Warsaw on Monday that most of the planet's coal reserves should be left in the ground to avoid the worst impacts of climate change.

"The coal industry faces a business continuation risk that you cannot afford to ignore," she told company bosses at the International Coal and Climate Summit, which was jointly organised by the Polish government. However, World Energy Council executive Joan MacNaughton warned developing countries, especially in Africa, not to pin too much hope on financial pledges from Western nations.

She said helping countries threatened by climate change would not be high on developed countries' priorities.

The talks in Poland take place amid increasingly dire warnings that time is running out to limit the increase in global average temperature to 2°C above preindustrial levels, as agreed at COP15 in Copenhagen in 2009.



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