

EWEA OFFSHORE COPENHAGEN 2015

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Presenter Stephen Sackur, left, with Siemens' Michael Hannibal, Vattenfall's Magnus Hall, Rolf Normann of Fred Olsen Ocean and LM's Leo Schot

Offshore wind 'needs Airbus collaboration'

CHRISTOPHER HOPSON

The European offshore wind industry needs to collaborate in an "Airbus-type project", with leading players working together to cut costs, EWEA Offshore 2015 was told yesterday.

Leo Schot, chief executive of LM Wind Power, calls for a "Seabus project", tearing a page from the airline sector's industrial culture of automation and serial production.

Three leading offshore wind companies — Dong Energy, MHI-Vestas, and Siemens Wind Power and Renewables — launched a joint declaration yesterday, called United Industry, as part of the drive to slash costs across the sector.

"Cost reduction remains a top priority of the offshore wind industry," Michael Hannibal, Siemens'

chief executive for offshore, told the panel discussion Hard Talk with a United Industry. "We need to create profitable investments for offshore projects, independent of subsidies.

"In a united industry, all stakeholders across the whole value chain are equally responsible to contribute and deliver. Siemens takes full ownership of this challenge. If we all do that, we will win."

Asked by presenter Stephen Sackur whether the industry "is disunited", Hannibal said the European offshore regulatory regime "is not as harmonised as it should be right now". One of the most difficult areas is the difference in regulatory regimes between UK and German waters.

Appealing to "all developers" to sign up to the joint declaration's

vision, Hannibal said no-one should think that a more united industry would mean less competition.

"This is all about reducing waste in the value chain and not about stealing profits from anyone," he said. "It is about reducing the cost of offshore wind, which has to come way down..."

"I am pleased to see Dong Energy and MHI-Vestas [have] signed up to this initiative."

However, Magnus Hall, chief executive officer of Sweden's Vattenfall, said although his company buys into the vision "to a certain extent, there are limits" and "I don't think we can sign up to this initiative".

"We can't share practices with other project developers, but we are working with industry suppliers to

drive down costs," Hall added. "Offshore wind is only around 2% of our business, but it is an area where we want to grow and make money.

"However, the wind industry in general could probably unite on more things, as in Vattenfall we are involved in a lot of different areas. I think we can find standard and regulatory issues which could drive costs down."

The panel was also warned against the formation of cartels. "I think we have to be careful when creating these industry clusters, so that competition in the industry is not gone," said Rolf Normann, managing director of Fred Olsen Ocean. ☐



Danish foreign minister Martin Lidegaard speaking at the opening session yesterday

RWE glad of offshore bounty as profits fall

ANDREW LEE

GERMAN utility RWE said “strong and stable” offshore wind income will bring it at least some relief this year, as it posted a 45% profits fall for 2014 and warned that the “crisis” in its conventional generation business is far from over.

RWE told investors that renewables remain “a cornerstone of its strategy” as it attempts to regain stability in a market that presents a “huge challenge”.

The German group is looking forward to a boost from two big offshore wind projects — Gwynt y Môr in the UK and Germany’s Nordsee Ost — which it said by the middle of the year will be fully operational and contributing “strong and stable” earnings.

“In addition, we are developing the Nordsee 1, Nordsee 2 and Nordsee 3 projects, in which we hold a 15% interest, and are considering building further offshore wind farms in the UK North Sea.”

RWE has a 50% stake in the 900MW Triton Knoll project off eastern England, after selling the other half share to Norway’s Statkraft.

It is also a partner in the Forewind consortium developing the 2.4GW Creyke Beck wind farm.

Confirming renewable-energy investment plans of €1bn out to 2017, RWE said its emphasis will be solely on onshore and offshore wind, with biomass “no longer a focal point of our strategy”.

Its RWE Innogy division suffered an operating profits drop of 8% to €186m last year, mainly due to an impairment charge on a Scottish biomass project.

The group as a whole saw its recurrent net income plunge to €1.3bn in 2014, down from €2.3bn a year earlier as wholesale power prices from its conventional stations continued to drop. ☐

Energy security ‘should be part of offshore wind’s sales pitch’

**BERND RADOWITZ
LEIGH COLLINS**

A FURTHER build-up of wind is not only needed to reach climate targets, but also to gain a greater security of energy supplies and independence from Russian fossil-fuel imports, ministers from Denmark and Sweden told EWEA Offshore 2015 yesterday.

“Sixteen EU member states are dependent on one single external supplier for all of their gas,” Danish foreign minister Martin Lidegaard told the opening session. “Dependency on a single or a few suppliers may lead to limited political autonomy and unpredictability.”

He added that, over the next 15-20 years, EU countries need to replace around 80% of their present power production capacity no matter what — a “unique possibility to make the EU independent of foreign energy suppliers”.

Denmark’s energy and climate minister, Rasmus Helveg Petersen, stressed that his country’s goal to

end fossil-fuel use by 2050 would only cost the equivalent of a cheap bottle of wine per week for each citizen. “That’s a pretty low price for a cleaner environment, freedom from the energy extortion that we’ve seen in the East [of Europe] lately,” he said.

His Swedish counterpart Ibrahim Baylan said: “Today’s geopolitics dictate that we must

Denmark and Sweden do.

High-ranking executives from the offshore industry were supportive of the politicians’ plans.

Siemens Wind chief executive Markus Tacke said the industry should make energy security a key part of its sales pitch.

“It’s time to more effectively position wind power in the global and political context,” he said.

“Even the most hostile nation cannot stop your wind supply.”

However, Claus Hviid Christensen,

vice-president of global offshore leader Dong Energy, cautioned that if Europe wants offshore wind to play a key role, politicians need to do more to ensure long-term visibility.

“We also need to know pretty soon that there will be a sizeable pipeline after 2020 to continue to deliver what I think we can deliver [in offshore wind],” he said. ☐

Dependency on a single [gas] supplier may lead to limited political autonomy

have greater energy security of energy supplies.”

Baylan added that broad co-operation across the EU is the best way to develop a sustainable energy system, but also emphasised that the bloc needs to include transport and heating much more in its renewable-energy plans — in the same way that Nordic countries such as

Areva-Gamesa tie-up seeks 20% market share

**DARIUS SNIIECKUS
ANDREW LEE**

Adwen — the newly minted tie-up between turbine makers Areva and Gamesa — aims to take 20% of the European offshore market by the end of the decade, led by a first-tier 8MW machine now under development.

Plans for the French-Spanish joint venture were first unveiled in January 2014. Since then, the partners have been working on organisational details and securing approval from shareholders and European regulators.

The joint venture will start life with a 2.8GW project pipeline and assets including two 5MW turbines — the AD 5-135, formerly the Areva M5000-135, and the AD 5-132, the new name for Gamesa's G132-5.0MW.

It also has the Areva 8MW platform, rechristened the Adwen 8MW, which the company will send to market to vie with other



The joint venture kicks off with a 2.8GW pipeline

offshore heavyweights, including MHI-Vestas' 8MW V164, Siemens' upscaled 7MW SWT-7.0-154 and the Senvion 6.2MW 6.2M152.

Adwen's 8MW model, which will have a 180-metre-diameter rotor turning a two-stage gearbox with permanent-magnet generator, is slated to be in serial

production by 2018.

"We are bringing the best of two companies together, and with it an 8MW turbine concept and the R&D to support it," Areva chief executive and Adwen chairman Louis-François Durret said yesterday. "In Adwen, we are building a fully fledged company

with all the capabilities in-house and we have brought along with it a significant pipeline of projects."

Adwen's general manager, Luis Álvarez, chief operating officer of Gamesa's offshore division, says: "The 8MW will be a super-competitive machine."

The new joint venture will manufacture its turbines at Areva's existing German factories in Bremerhaven — where expansion plans are on the cards — and Stade, two sites "ideally positioned to equip North Sea and Baltics projects".

"This strategy will allow us to drive costs down to reach the goal to reach €100 per MWh," says Durret. "The company will fulfil industrial commitments engaged by Areva and Gamesa, in France and in the UK, comprising the creation of factories in Le Havre and the implementation of a network of suppliers and partners throughout [France]." □

Photograph | Adwen

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Swedish energy minister Ibrahim Baylan at EWEA Offshore 2015 yesterday



Mix of subsidies and state aid for Sweden

BERND RADOWITZ

A PLANNED new Swedish support system for offshore wind may be a mixture of direct subsidies and state aid for offshore grid connections, energy minister Ibrahim Baylan told journalists at EWEA Offshore 2015 yesterday.

Sweden's energy agency is currently analysing different types of support systems to make the technology viable in its stretch of Baltic Sea. It plans to have a confirmed proposal by June, ahead of introducing a new law in parliament.

"I can see that it could be both some kind of [direct] subsidies, but also support for the

connections," Baylan said.

"For obvious reasons, you have higher costs when connecting [offshore wind parks] to the grid.

"But we are very clear in the government that we will have some kind of public support for offshore wind power."

This mix of direct and indirect support would be similar to the model Denmark has been using very successfully for years.

Sweden's Social Democrat-Green minority government sees offshore wind as a good way to replace four or five nuclear power plants that will be phased out in the coming ten to 15 years as they reach the end of their planned lifespan, Baylan added.

UK to evaluate three grid links to France and Denmark

DARIUS SNIIECKUS

UK electricity regulator Ofgem has launched consultations that could clear the way for a trio of new interconnectors linking Britain with France and Denmark.

The FAB Link, the IFA2 and the Viking Link could be built by the end of the decade to boost transmission capacity by 3.4GW.

"These three interconnectors would further boost Britain's energy security," says Martin Crouch, Ofgem's senior partner for electricity transmission.

By Ofgem's calculations, the three proposed links, which

would allow for the tie-in of huge volumes of renewable energy production, would provide "around £8bn [€11.2bn] of benefits" to UK consumers over the next 25 years.

There are currently four interconnectors linking the UK and Europe, providing around 4GW of capacity — equal to about 4% of Britain's power supply.

Ofgem is debating whether to shelve plans for a fourth interconnector, the UK-to-Ireland Greenlink, on the grounds that the project "did not demonstrate enough value for [British] consumers", says Crouch.

Minister: Apple deal proves wind's reliability

A multi-million-dollar investment by Apple in a renewables-powered data centre in Viborg, Denmark, proves that large amounts of wind energy can be reliably incorporated into national grids, Danish foreign minister Martin Lidegaard told Offshore 2015 yesterday.

"The fact that Apple decided not to install back-up generators for the data centre highlights the trust that Apple has in the Danish power grid, even though almost 40% of the power would be generated by wind turbines," said the former energy minister.

DNV GL unveils JIPs for better design practices

DNV GL has unveiled three joint industry projects (JIPs) aimed at developing recommended design practices and methods to enable the global wind industry to lower risks and reduce costs.

The JIPs will cover coupled dynamic analysis of floating wind turbines; the validation of turbulence models; and an integrated approach to design, installation and maintenance of heavy-duty bolted joints.

Axys to install pioneering two-system Lidar device


Floating Lidar outfit Axys Technologies has been tapped to deploy a first-of-a-kind two-system WindSentinel unit at Offshore Renewable Energy Catapult's testing site off northeast England.

The buoy-shaped device will undertake a one-month validation and research programme, before being moved to France as part of a wind-measurement assessment for two unnamed commercial wind farms.

Japanese deal on Ideol floating foundation

French floating foundation designer Ideol has inked a breakthrough deal with Japan's Hitachi Zosen to build an offshore wind turbine based on "damping pool" technology.

The tie-up aims to offer a cost-competitive solution to support the Japanese Ministry of Economy, Trade and Industry's prioritisation of floating wind farms as "a strategic necessity" for the national energy mix.



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EWEA chairman and head of Siemens Wind, Markus Tacke, at the opening session yesterday

US sector 'set back years' by Cape Wind

BERND RADOWITZ

THE cancellation of power purchase agreements for the 364MW Cape Wind project off the coast of New England, will probably "slow down the efforts in the US for going offshore for a couple of years", Siemens Wind boss Markus Tacke told journalists at EWEA Offshore 2015 yesterday.

"We all know [Cape Wind's] power-purchase agreement has expired — that basically puts the project, if it will ever be built, on a very long perspective," Tacke said. "It's not over, but it will take time until people have reconsidered what needs to be done."

While he sees potential for offshore wind in the US, he points out that the country's vast availability of land and good wind resources are an advantage for the

onshore sector that regions such as Europe do not have.

To regain momentum for offshore wind in the US, the technology's advantages in terms of grid connection need to be stressed, he said.

"You save a lot of grid connection costs if you don't need to transport all the energy from midwestern America to the load centres at the east coast."

The US may have lost its "next-mover advantage" for offshore wind outside Europe to Asia, Tacke believes.

"If China does what it plans — and that is normally what they do — it will be one of the most important offshore markets," he said, adding that other Asian countries, such as Taiwan, are also looking into possibilities for offshore. □

Photograph | Jason Bickley/EWEA

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US tycoon Donald Trump has been trying to stop the 11-turbine EOWDC near Aberdeen as he believes it will spoil the view from his luxury golf resort

Vattenfall confident on delayed test site

ANDREW LEE

SWEDISH utility Vattenfall is still confident of building a controversial offshore wind test site in Aberdeen Bay, Scotland, but says the “emphasis” of the project may shift from turbines towards innovations in associated fields such as O&M.

Vattenfall is leading the development of the European Offshore Wind Deployment Centre (EOWDC) in the face of determined opposition by Donald Trump, the US billionaire who claims the project will ruin the view from his luxury golf resort.

The 11-turbine scheme was originally due to begin exporting its first power later this year. But legal challenges by Trump and others have bogged the development down, and its grid-connection date has since been shunted to 2017.

Andy Paine, Vattenfall

UK’s head of offshore wind development, says the company “remains committed” to taking the EOWDC forward, and is awaiting the results of final challenges to the project’s onshore and offshore plans.

“We would gladly get on with this project if it wasn’t for those,” says Paine. “We must wait for the process to work its course and then move ahead, but what we’re not doing is giving up on the project or running away from it.”

Paine rejects suggestions that the delay has undermined the EOWDC’s aim to act as a test-bed for turbines vying to be used in UK Round 3 projects. “We still have interest from potential turbine suppliers. I don’t accept it’s not relevant any more for turbines.

“Right now we believe there’s certainly still a business case. It’s not just turbines, it’s other technology and the testing and demonstration of innovations.

“We have a fairly wide envelope to explore — some of the innovation in the O&M sector, for example. It may be that the

It’s not just turbines, it’s other technology and the testing of innovations

emphasis changes.”

Paine says Vattenfall is “still in discussion with a number of investors” to share the financing of the EOWDC between itself and its project partner, Aberdeen Renewable Energy Group.

The EOWDC project company

expects the decision on the Trump Organization’s latest appeal against the Scottish government’s offshore consent for the project to arrive “very soon”.

According to Paine, another legal setback for the tycoon — who failed to secure a judicial review of the consent last year — would mark the last automatic right of appeal for Trump, with any further challenges needing the sanction of the court.

The result of a separate appeal by local residents relating to the EOWDC’s onshore works is expected in the spring or early summer.

Paine says: “We’re confident in the long term that our consents will remain intact. It’s a question of timing. We see no reason why what we’re doing and what Donald Trump is doing can’t live in harmony. There’s no question of us dumping this project.”

Photograph | PA



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Wednesday 11 March

HAPPENING TODAY

Conference sessions: Top picks

Cost reduction: Delivering on the promise

14:30-16:00 (Room A12)

Cost reduction is one of the hottest topics in the offshore wind industry. Get expert insight into expectations and potentials of delivering on the promise to reduce offshore wind's cost of energy. Hear the views of suppliers, operators and governmental officials.

Turbine technology: Driving down the cost of energy

17:00-18:30 (Room A10)

Learn about new models that help to decrease the cost of energy, the most important innovations that need to be addressed to reduce the LCoE and new criteria of wind turbine design, taking into account the real operational conditions of wind farms.

THE BEST NETWORKING

Poster award ceremony and conference networking

16:00-17:00

The Poster Gallery houses over 200 technical posters. Celebrate with the researchers behind the winning posters over canapés and drinks.

EWEA and Renewable UK networking party

16:00-17:00 EWEA stand (Hall A, stand A-C22)

Celebrate with EWEA and Renewable UK as they announce the location of the next offshore wind event. Network with your peers over some drinks and canapés.

Conference dinner

19:30-23:00

Enjoy an evening of high-level networking, delicious food and memorable entertainment. This event is for conference dinner ticket holders only.



SIDE EVENTS

Offshore wind in Denmark: Conditions for growth towards 2020 and beyond

09:00-10:30 (Meeting Room 18)

Major stakeholders discuss the future growth of Danish offshore wind energy

MareWint project workshop

09:00-13:00 (Meeting Room 19)

The MareWint project workshop presents the scientific highlights of the work done so far

Setting Up Business in Germany

11:00-12:30 (Meeting Room 21)

Offshore market outlook, networks & public support

Experience and Explore Denmark

14:30-18:00 (Meeting Room 19)

Learn what Denmark can offer the offshore wind industry

SEASTAR Alliance: Industrial collaboration on cost reduction

16:00-17:15 (Meeting Room 18)

Join us for the launch of a new offshore wind industrial alliance

Floating offshore wind, from R&D to the market

16:00-18:00 (Meeting Room 7, level 1)

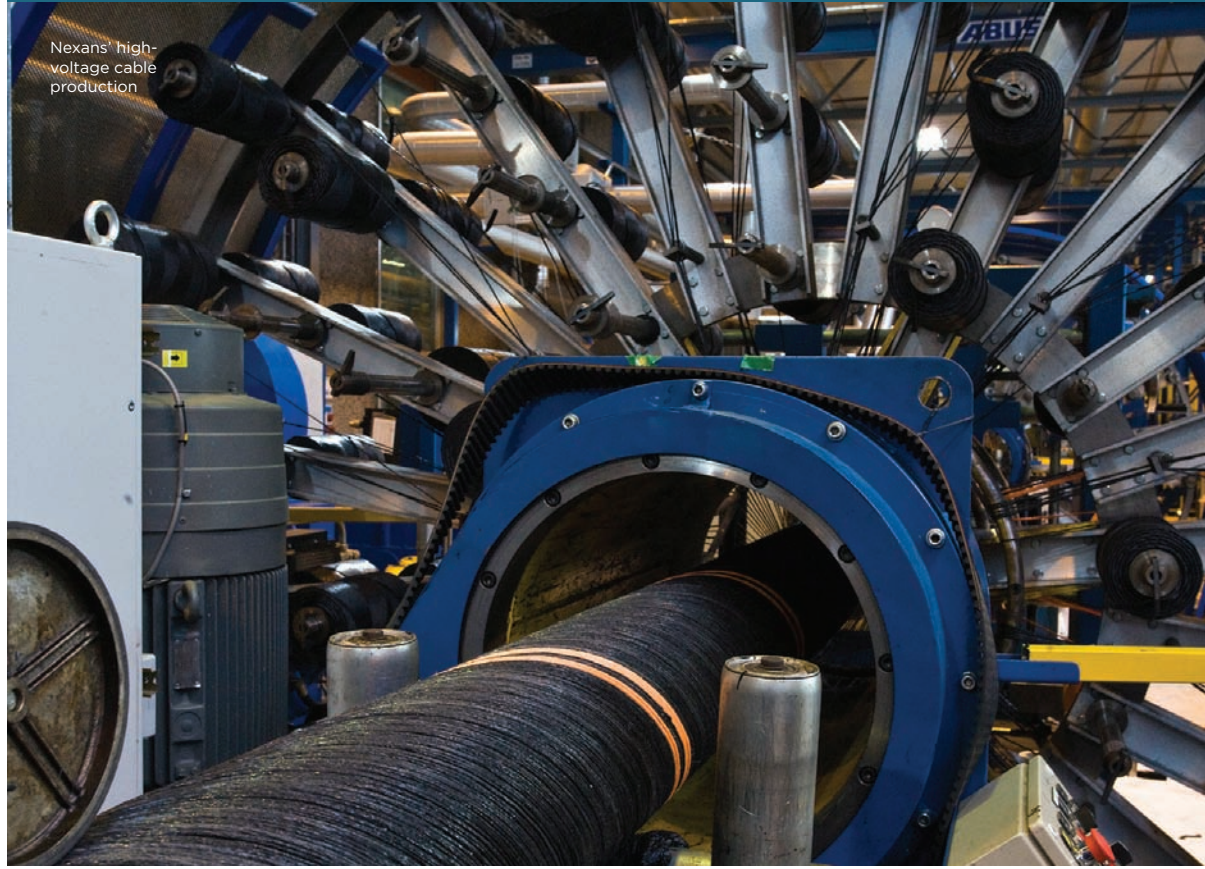
An update on the actual developments and the perspectives of floating offshore

DON'T MISS TOMORROW

Science & research: Controlling offshore

09:30-11:00 (Room A10)

Science and research, innovation and floating turbines — this session has it all. Learn about controls of offshore wind turbines, control of floating platforms and load mitigation from bright minds in the offshore wind industry.



Nexans' high-voltage cable production

Nexans gears up for 1.4GW Norway-Germany grid link

DARIUS SНИЕCKUS

FRENCH cabling outfit Nexans has begun planning to lay the giant 1.4GW NordLink interconnector that will tie together the Norwegian and German electricity markets for the first time.

Under a €500m turnkey contract, the Paris-based contractor will install a pair of 525kV high-voltage direct-current (HVDC) cable subsystems with a total length of more than 700km across the North Sea, as part of a collaborative project between transmission system operators Statnett and TenneT, and the German government-owned development bank, KfW.

With the construction of NordLink — due to come on line by 2019 — surplus wind and solar power produced in Germany can be exported to Norway, with hydropower from the Scandinavian country exported into mainland Europe.

“The concept of a link of this sort between Norway and

Germany [has been discussed] for a long time but the trigger is the exploitation of the renewable-energy resources in the two countries,” says Nexans HV submarine sales director Domenico Gerace.

“This is the first step,” he adds. “To have an optimal system, we will need to have several

impregnated non-draining] HVDC cables in water depths down to 450 metres off the coast of Norway and Denmark. Nexans will use its *Skagerrak* cable ship and bury the wires under the seabed using its Capjet trenching machine.

The Nexans cables will feature the same design used on the *Skagerrak* 1, 2 and 3 HVDC interconnection projects between Denmark and Norway, as well as the recently announced *Skagerrak* 4 interconnector

between the two countries.

“There have been substantial improvements to the technology from the first *Skagerrak* project in the 1970s, but the *Skagerrak* 4 and now the NordLink will be state-of-the-art HVDC,” says Gerace.

“This is the best match between a project and our cable technology and capabilities.” □

Without systems like NordLink, the renewable-energy potential of Europe could be lost

connections to Germany linking it to the [pumped hydro storage] ‘battery’ of Norway’s hydropower reservoirs that can be charged with renewable energy from Europe.

“Without systems like this, the renewable-energy potential of Europe could be lost.”

Nexans will design, fabricate and install so-called Mind (mass

Siemens scales up turbine to 7MW

DARIUS SNIECKUS

SIEMENS has scaled up its pioneering 6MW offshore wind turbine to 7MW, with a revamp centred on a beefier permanent-magnet generator (PMG).

The SWT-7.0-154, which is built around a direct-drive transmission system, is calculated to be capable of churning out 10% more power than its forerunner.

“With the increase of power output, our new direct-drive offshore wind turbine takes a major stride forward,” says Siemens Wind Power chief executive Michael Hannibal.

“Cost reduction through innovation is a key factor in our activities: we retained the proven reliability of the predecessor by refining only the components needed for the power uprate.”

Stronger magnets and generator segments in the PMG have been integrated into the turbine design, which is keeping the 154-metre-diameter rotor being flown by the 6MW model.

The machine’s converter and transformer have also been uprated, in line with the higher electrical output, but all other componentry remains “the same tried and proven engineering” of the 6MW turbine.

Hannibal says the 6MW version will continue to be sold, but Siemens has renamed the D6 product platform D7.

Last May, the German company revealed that it plans to unveil a 10MW offshore turbine by the end of the decade.

The supersize model would have a rotor diameter of more than 200 metres. ☐



The 7MW model will churn out about 10% more power than its 6MW predecessor

Photograph | Siemens

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Japan 'not ready' for 8MW model

KARL-ERIK STROMSTA
BRIAN PUBLICOVER

THE Japanese offshore wind market is "not ready" for MHI-Vestas' 8MW turbine, according to the company's chief technology officer.

Torben Hvid Larsen says the Japanese market is not yet large enough to support vessels that can install such a massive turbine.

"If I have to be honest, I don't think that the Japanese market is ready for the 8MW yet," says Larsen. "Today in Europe there are approximately three to four vessels that can handle and transport and carry the 8MW turbine."

Instead, prospective Japanese developers should focus on smaller, more easily managed models, such as Vestas' V112-3.3, Larsen says.

"There's various ships and vessels that can handle [the 3.3MW model]," he says. "I think



MHI Vestas' prototype 8MW V164 at Østerild, Denmark

it's a much better choice for the Japanese market."

Yukinobu Uchida, country manager for DNV GL, agrees with Larsen's assessment. "Japan doesn't have vessels for that size of turbine," he tells *Recharge*.

Two months ago, MHI-Vestas

landed its first commercial order for the V164-8.0 turbine, for Dong's 258MW Burbo Bank Extension in UK waters.

A prototype has been turning since February last year at the Danish national test centre in Østerild.

Floating turbine to generate hydrogen

BRIAN PUBLICOVER

SURPLUS electricity generated by a 2MW floating wind turbine off southwest Japan will be used to produce hydrogen for fuel cells.

The Kabashima demonstration project, which consists of a Hitachi turbine mounted on a hybrid spar foundation, generates more electricity than can be consumed by the tiny fishing community on the island of Kabashima, to which it is linked. The aim is that the hydrogen fuel cells will provide power to neighbouring islands.

The wind project in the remote Goto archipelago is a \$50m (€46.5m) initiative operated by a consortium of companies and research bodies under Japan's Ministry of the Environment, which aims to improve and mature floating wind technology.

Photograph | MHI-Vestas



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Cost-cutting floating Lidar sails through two-year trial

FLiDAR's floating Lidar system



DARIUS SNIECKUS
FLOATING Lidar has taken another step towards being accepted as a “bankable” wind-measurement technology, following the completion of the two-year test run of a pair of prototypes at RWE Innogy’s 576MW Gwynt y Môr development off Wales.

The sea trials, carried out under the UK Carbon Trust’s Offshore Wind Accelerator (OWA) programme, point to the laser-based wind-data collection technology “progressing well towards being effectively deployed” as a far cheaper alternative to fixed meteorological masts at offshore wind farms.

“The OWA programme has the aim of reducing the cost of offshore wind power by 10% in time for [the UK’s] Round 3,” says Carbon Trust chief operating officer Michael Rea. “The results of this research highlight how the development of innovative technology can play a very real and critical part in

helping us reach this aim.”

The trials, which were launched in September 2012 at the 160-turbine project in Liverpool Bay, scrutinised two leading Lidar concepts — Belgian outfit FLiDAR’s eponymous design and one being developed by the UK’s Babcock.

FLiDAR’s model has motion

Innovative technology can play a very real and critical part in helping [to cut costs by 10% by 2020]

compensation with a Leosphere Lidar system. Babcock’s uses a low-motion buoy fitted with a Natural Power ZephIR Lidar.

Neil Adams, project manager at engineering consultancy Frazer-Nash, which undertook the data analysis for the project, notes: “The analysis demonstrated not just the ability of the systems to

measure wind speeds, but also how that ability is affected by sea state and atmospheric conditions.

“This will help developers judge how the systems could perform at their sites and will help add value to their operations.”

As well as being cheaper to install than met masts — floating Lidar systems can be bought for €1.2m (\$1.36m), compared to €13m for a deep-water bottom-fixed mast — the new technology is mobile, meaning it can be moved around a wind farm to collect “more accurate data on the actual wind resource available”.

An independent review by energy consultant DNV GL underscored that floating Lidar can feed-back “accurate wind-speed measurements when the measurement buoys are exposed to waves, currents and tides”.

Last month, Danish utility Dong, one of the OWA member

companies, announced plans to pilot an innovative radar-based wind-measurement system at its Westernmost Rough development off northeast England. ☐

M3EA approval

French technology outfit Nass&Wind’s M3EA floating Lidar platform has been given a stamp of approval by DNV GL, following prototype trials in the English Channel.

The year-long tests off the Normandy coast “demonstrated performance in line with industry standards”.

“The M3EA has been shown to reproduce onshore Lidar wind speeds and wind directions with a high accuracy and DNV GL considers that this device has provided confidence with respect to both its accuracy and its availability during this validation campaign,” says DNV GL country manager Jérôme Jacquemin.



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Block Island's Haliades will be made in France

Alstom gets final go-ahead at Block Island

KARL-ERIK STROMSTA
RICHARD A KESSLER

Deepwater Wind has given France's Alstom the final go-ahead to begin manufacturing five of its 6MW Haliade 150 turbines for the Block Island offshore wind farm.

The news follows last week's announcement that the 30MW pilot development in Rhode Island state waters has become the first US offshore project to reach financial close.

The twin announcements all but ensure that it will be the first offshore wind farm in the US, with commercial operation due to begin in the fourth quarter of 2016.

"This is the start of a new chapter in sustainable energy for the US," says Anders S e-Jensen, Alstom's vice-president for offshore wind. "We believe this project will highlight both the commercial and technological viability of offshore wind in the US."

The formal notice to proceed is a "major milestone and confirmation that this project... will now materialise", adds Yves Rannou, Alstom's senior vice-president for wind.



Deepwater has come a long way since 2013, when US interior secretary Sally Jewell signed the lease for the wind area off Rhode Island and Massachusetts, watched by Jeffrey Grybowski

The notice to proceed represents final contractual authorisation for Alstom to proceed on engineering and manufacturing. The French company is responsible for supplying, installing and commissioning the direct-drive turbines, as well as providing 15

years of O&M support. The machines will be made in France.

Having reached financial close on \$290m ( 270m) of funding, Deepwater has now secured all debt and equity funding needed to build and operate the wind farm. Joint initial mandated lead

arrangers are Societe Generale and KeyBank National Association, which is based in Cleveland, Ohio. KeyBank's involvement bodes well for the nascent industry, which has struggled to attract support from the US financial community.

The bank financing is in addition to more than \$70m of equity funding already in place from Deepwater's owner, investment group DE Shaw.

"We are on the cusp of bringing offshore wind from theory to reality in the US. We're incredibly proud of our position at the forefront of the US offshore wind industry," says Deepwater chief executive Jeffrey Grybowski. "We're full speed ahead and moving ever closer to steel in the water."

In January, Gulf Island Fabrication started making the project's steel jacket foundations in Louisiana, with completion scheduled within months. In the coming weeks, Specialty Diving Services is due to begin fabrication work on components of the foundation substructures at Quonset, Rhode Island. □

Photography | Nicolas Job/Alstom | Tammi Heilmann

RICHARD A KESSLER

THE US federal agency responsible for offshore wind development is moving ahead with a competitive wind lease off New Jersey, even though the state has failed to create a market mechanism to incentivise the sector — as required by a 2011 law.

Some developers want the Bureau of Ocean Energy Management (BOEM) to wait until the state's electricity regulators implement the Offshore Renewable Energy Certificate (OREC) programme, which was agreed in the landmark Offshore Wind Economic Development Act (OWEDA) signed by Republican New Jersey governor Chris Christie in 2010.

The law requires that a proportion of electricity sold in the state comes from offshore wind, to support at least 1.1GW of projects, through certificates granted to offshore developers that then have to be bought by state utilities.

BOEM boss Abigail Ross Hopper says that the bureau is not putting the cart before the horse with the lease sale. "I would not characterise it that way," she tells *Recharge*. "I think you can have a lease sale prior to the market mechanism [and] you can have the market mechanism in place prior to the lease sale. I don't think you have to have a definitive order.

"I think markets exist when policy creates the markets."

Analysts say the BOEM is in a difficult situation as its brief is to move the offshore wind industry forward. However, a poor auction result could represent a setback in its effort to "stand up" the sector



New Jersey Governor Chris Christie seems to have withdrawn support for offshore wind as he eyes a bid for the US presidency

New Jersey to get offshore leases despite stalled support system

on the east coast before President Barack Obama leaves office in January 2017.

Some non-governmental organisations and Democrats believe that the OREC plan has not been adopted by the New Jersey Board of Public Utilities (BPU) because Christie has ambitions to run for president and needs the support of financial backers that favour fossil fuels over renewables. Although Christie cannot legally force the BPU to implement the OREC programme, he has not made any public effort to lobby its members

— in contrast to his initial enthusiasm for the OWEDA.

Meanwhile, local developer Fishermen's Energy has taken the BPU to court over its refusal



BOEM boss Abigail Ross Hopper

to qualify a pilot project in state waters for the OREC programme. The majority Democrats in the state legislature are due to pass a bill that would force the BPU to approve the project and quickly implement OWEDA regulations. Christie is unlikely to sign the bill, should it reach his desk.

The BPU has its defenders. Business groups note that New Jersey has some of the highest electricity prices in the US and believe that ratepayer subsidies to make offshore wind viable would be excessive and make industry less competitive. ☐

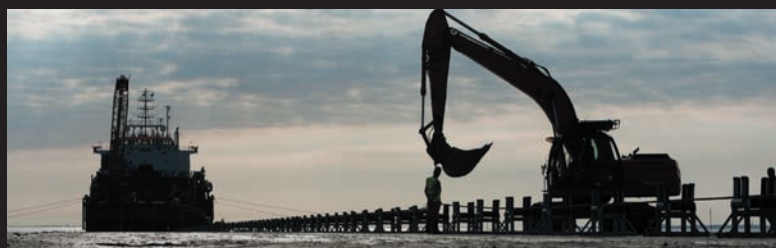
Photography | AP/PA | Business Network for Maryland Offshore Wind

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Photos of the day

1) Crown Prince Frederik of Denmark, *left*, inspects a technical model on the Siemens stand; 2) Ministers and chief executives line up for the ribbon cutting to open the exhibition hall; 3) A delegate enjoys the virtual reality headset on the top of the MHI-Vestas stand; 4) Exhibitors at the State of Green opening reception last night; 5) BBC journalist Stephen Sackur chairs the 'Hard Talk with a United industry: Will you Deliver?' session

Photography | Jason Bickley | David Plas



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