Eon to rip out Scroby Sands export cable

Eon UK is finalising plans to replace one of three export cables at the troubled Scroby Sands offshore wind farm at Great Yarmouth on England’s east coast. Norwegian cable supplier Scanrope Subsea has been contracted to deliver the new wire in February.

The damaged cable will be removed around the turn of the year. It has given the operator trouble since early in the farm’s operational life and has not been working at all since May this year.

Eon admitted that although it can export power from all 30 Scroby turbines through the remaining two cables, maximum output is constrained to 40MW. Commenting on the decision to replace rather than repair the cable in-situ, a spokesman said: “The advantage we have with Scroby Sands is that because it is not too far offshore we have a relatively short cable length of about 3km.

“Taking costs and benefits into account, it makes more sense to install a new cable rather than carry out a repair to the failed section of the existing export cable.”

It is rumoured in the market that Oceanteam is being lined up to carry out the cable replacement, but this has yet to be confirmed.

Eon has had a number of cable problems, as well as turbine failures, on Scroby and the latest expensive fix is likely to be the subject of contractual negotiations with the farm’s original turnkey supplier Vestas.

Sources suggested that the wind farm’s warrantees cover the cable issues, although Eon refused to comment on this issue.

Late last year the developer reported that generating capacity was “significantly reduced for two months when one of the three transition joints (connecting the submarine export cables to onshore wires) buried in the beach failed, causing one of the three circuits to be taken out of service for repairs”.

The ongoing loss of the cable through the month.

CONTINUED ON PAGE 2

Finance deal kicks off 30MW Lissett

Developer Novera Energy has closed a £31.5 million financing deal with investment house Fortis that will see construction of the 30MW Lissett wind farm in Yorkshire start later this year with full operation in late 2008.

Total costs at the 12-turbine project have been set at £37.7 million. As first reported in reNews in June, German turbine manufacturer Nordex has been signed on to provide its 2.5MW N90 machines under an engineering, procurement and construction contract.

A power purchase agreement is also in place with output heading for Scottish and Southern Energy.

Lissett will be built on a former World War II airfield near Bridlington.
Vestas probes V47 turbine collapse

Vestas is launching a detailed investigation into the collapse of a V47 turbine (pictured) at ScottishPower’s 22MW Beinn an Tuirc wind farm in Scotland.

The company has been given the all-clear to move the nacelle from the project site on Kintyre to its nearby Campbeltown facility. The unit will be dismantled and tests run to determine the exact cause of the accident earlier this month. The 63m turbine collapsed, the tower bending in half, during high but unusual winds.

Initial reports suggested some sort of control problem prevented the machine from shutting down as normal. Vestas, which commissioned the turbine in November 2001, said there “is no early indication whatsoever that there is a serial inherent safety issue with this particular turbine class”.

However, as a result of the incident the UK Health and Safety Executive has suggested that V47 and V52 turbines should have their maximum speed pause adjusted to 15 metres per second from 25 m/s, and that auto resets should be limited to five within a 24-hour period rather than 10.

Radar blip the last hurdle for giant 500MW Clyde wind farm

Ministers in Edinburgh appear ready to sanction the 500MW Clyde wind farm in southern Scotland once concerns over civilian radar impacts are addressed by developer Airtricity.

The Scottish government issued a letter to the developer acknowledging that consent for the country’s biggest wind farm to date has been “recommended”, albeit pending resolution of a National Air Traffic Safety En Route objection.

The letter details a technicality that means the NATS objection must be settled prior to consent, rather than as a “suspensive” condition of consent, but otherwise appears to clear the way for imminent approval of the 173-turbine scheme.

Sources said “a solution to the radar issue is in hand”, although details were not revealed.

This suggests a sanction from ministers could come this year, although it is more likely early in 2008.

Contracting on the job is already at an advanced stage. Morgan Est (formerly Amec Construction) is understood to have been named as preferred civil engineering contractor.

Clyde is expected to take three years to build and will be located along the M74 corridor south of Glasgow.

The project holds a grid connection offer for December 2009.

Evelop buys stake in German offshore farm

Econcern subsidiary Evelop has taken a majority stake in the up-to-400MW Gode Wind 1 project being developed by German company Plambeck Neue Energien some 33km north of Norderney.

The Dutch company said this week that the 80-turbine offshore wind farm in the North Sea would start construction before the end of 2011 based on turbines of at least 3MW. Gode Wind 1 was granted approval by the German Maritime and Hydrographic Agency in August 2006. Water depths at the site are between 28m and 33m.

Eon replacing Scroby wire

EoN is replacing Scroby’s Scroby power cables and Scroby with its own Scroby power cables. The project is expected to cost around $260 million.

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Repower at double in US

Repower has signed a deal to provide 25 MM92 turbines to US company Cannon Power for its Windy Point wind farm in Washington state. The 50MW deal doubles the turbine company’s US customer base. Delivery is scheduled for next year.

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Developers sound the retreat across Scotland

Developers across Scotland are scaling back or abandoning projects in the face of a planning system that continues to impose constraints and delays on larger schemes.

Anglo-Dutch company Infinergy confirmed this week that it has withdrawn a Section 36 application for an up-to-150MW wind farm at Tom nan Clach in the Highlands.

Instead the developer will seek consent from local authority councillors for a 17-turbine scheme around a third of the original size. A fresh application is expected in February.

Infinergy has also ditched plans for a potential 180MW project called Tullich in Argyll and Bute.

Scaling back in the far north of Scotland is North British Windpower, which for the second time is reducing its Bettyhill project on the Skelpick Estate in Caithness. Originally a 100MW scheme, then 50MW, the developer is now seeking to move forward with only two turbines.

Amec is also cutting back, this time on an already rejected Section 36 bid.

The company is initiating “community engagement” in pursuit of a smaller version of its Clashindarroch farm in Aberdeenshire.

Airticity, meanwhile, last week officially withdrew a long-standing Section 36 application for its 60MW Kilpatrick project near Glasgow.

The developer said: “The Scottish government asked Airticity to confirm its plans for the wind farm and, having spoken to West Dunbartonshire Council about its objections, Airticity has decided not to proceed with the application.”

More retreats could be on the way.

A spokesperson for the Scottish government said that while a systematic review of the Section 36 queue is not on the cards, “it would be fair to say we are being more proactive in asking developers for information as necessary”.

Minnygap gets the boot

Renewable Energy Systems has been refused permission to build a 15-turbine wind farm at Minnygap in southern Scotland.

Members of Dumfries and Galloway Council agreed with a planning recommendation that cited visual and cumulative impacts when tossing out the scheme last week.

Elsewhere, the company is appealing against local authority rejection of its 13-turbine Wadlow Farm project in Cambridgeshire.

The company said that South Cambridgeshire Council has “effectively closed the door to all wind farms” as a result of its June decision on Wadlow, which was based on concerns over landscape impacts.

Banks sets out stall in Cumbria

County Durham company Banks Developments has unveiled plans to build a wind farm with between 15 and 20 turbines at Moresby Moss in Cumbria, north-west England.

Exhibitions for the scheme, which also takes in Keekle Head, were held this week.

A full planning application is expected to go to Allerdale and Copeland district councils in the spring of 2008.

Feedback from this week’s public shows will “help inform the design of the scheme”, said Banks.

Elsewhere, the company is in the early stages of planning for a wind farm in the

Blaengwen challenge fails at the High Court

The High Court has tossed out an application for a judicial review of Catamount Cymru Cyf’s consented 30MW Blaengwen wind farm in Carmarthenshire.

The judge ruled that “no arguable case in law is disclosed on any of the grounds put forward” by the claimant, Janet Dube.

Jerry Sturman of developer agent Force 9 Energy said the claim “was a cynical attempt to delay the development process by those who disagreed with the council’s legal and democratic decision”.

Council vote downs Drone

Scottish Borders Council has tossed out plans for a 22-turbine wind farm at Drone Hill on Coldingham Moor.

The development control committee voted unanimously against the 30MW project put forward by Mistral company PM Renewables.

Planners recommended refusal on the grounds of location and tourism impacts. Tip heights had been set at a relatively modest 76m.
Prenergy on top of the world in south Wales

Prenergy Power has been given the nod to build a world-leading 350MW wood-fuelled biomass plant at Port Talbot in south Wales.

Energy Secretary John Hutton granted the go-ahead for the £400 million project yesterday, clearing the way for construction to kick off next year with full operation planned for the end of the decade.

“This will be the biggest biomass plant in the world, generating enough clean electricity to power half of the homes in Wales,” said Hutton, who added the plant would meet around 70% of the Welsh Assembly’s 2010 renewables target.

Matthew Carse of Prenergy called the sanction “a groundbreaking step, not only for Port Talbot but for environmentally friendly power generation in the UK as a whole”.

He added: “Using woodchip from environmentally certified sustainable forestry, which ensures harvested trees are replanted, means that generation is carbon neutral and sustainable.”

Prenergy will import around 3 million tonnes per annum of mainly US and Canadian wood byproducts to fuel the plant, which will use circulatory fluidised bed technology.

Power will be exported via a new underground 275kV link to an existing substation at Margam 2km away. Construction of the plant, which will be on Associated British Ports acreage, is expected to take around three years.

Tendering for the job is thought to be at an advanced stage with potential engineering, procurement and construction bidders already in negotiations for the plum contract.

Around 150 jobs will be created on completion of the scheme.

* Welsh Power is planning to build two “ultra-efficient” green biomass plants of 49.9MW each with fuelstocks imported via Newport Docks.

Subsidiary Nevis Power is in the first instance proposing a £70 million CHP plant. Feasibility studies have been completed and an application is expected to go to Newport City Council next year.

Steven’s Croft opens account

Eon has generated first power at the 44MW Steven’s Croft biomass plant near Lockerbie in Scotland. The company said final testing is underway at the £90 million facility with full operation scheduled to start next month.

“We started generating electricity from the plant less than two years after we first broke ground on the site,” said project manager Andy Carling.

“We have already tested the boiler and various other components, but this was the first time we’ve run everything together as we would during full commercial operation.”

The company said Steven’s Croft, the UK’s largest dedicated biomass power station, was built on time and on budget.

And it doesn’t take long to get there from work; the average commute is just 22 minutes compared to 55 minutes for London.

With the best climate in the UK, a beautiful natural environment and activities to suit all tastes… the quality of life here is without equal.

Talk to Regen SW today about opportunities in South West England, it’ll be a real breath of fresh air.
Global offshore wind is moving at last, or at least it will be in 2008. Next year promises to be the biggest ever for the sector with around 400MW confirmed for commissioning.

What is more, momentum is set to continue for at least the following three years. It has been said many times before but this could indeed usher in the beginnings of a major industry.

There is certainly unprecedented optimism. Airtricity offshore director Torben Andersen said: “There is a huge potential for offshore wind in Europe.

“Supply chain limitations will have an impact on the scale achievable in the coming years. A more developed supply chain will be in place post 2010, enabling offshore to grow significantly.

“The UK is the key market at present with a number of well-developed projects and strong political support.

“Germany also offers huge potential but will not deliver any significant capacity until 2011-2012.”

This year has seen a marginal increase in global offshore installation to 220MW from 203MW in 2006. This is close to the market’s best year so far — 2003, when 280MW went in — and a continued improvement from 2004 and 2005’s dire totals of 60MW and 90MW respectively.

Cumulative global offshore wind capacity now tops the 1GW mark with 1123MW in the water. But, and this is a big but, the sector can only maintain momentum if governments with offshore wind aspirations accept there has been a paradigm shift in the costs and timescale for realising projects.

Experience also shows that technical issues threaten to push operating costs even higher. A number of schemes, including Kentish Flats, Scroby and Nysted, have seen equipment failure eat into availability and production.

Developers are now calculating offshore wind capital costs per megawatt installed at up to £2 million (£2.8 million) for near-shore farms and even more for those farther out.

This is nearly double where the industry aspired to be when it embarked on the offshore journey at the start of the decade.

There is also a growing realisation that projects are taking many years longer to develop than first anticipated.

The British Wind Energy Association has estimated, for example, that UK projects spend between six and 13 years getting from lease award to installation.

This year’s reNews global outlook of future plans (page 6) shows that 404MW of offshore capacity will be installed in 2008, nearly twice the volume this year but less than half of the 1000MW foreseen this time last year.

In 2009 the figure jumps to more than 1000MW, roughly the same as forecast last time, while an explosion in activity seen topping 2500MW comes in 2010, with similar levels forecast for the following year. As always, these figures come with strong health warnings. In 2009, there has to be a serious question mark over whether the 300MW Thanet farm in the UK will be completed as well as the 105MW Cote d’Albatre scheme in France.

The following year the forecast is underpinned by four major projects in Germany constituting more than 1100MW of capacity, and yet commentators are sceptical whether the economics add up.

Annual investment levels in offshore wind will hit around £800 million (£1.12 billion) in 2008, easily pass £1 billion the following year, and in 2010 top £2 billion if just a third of what is planned gets built.

However, the market faces severe constraints as it tries to ramp up to boom from bust. A number of recent studies have independently concluded the same thing — that turbine shortages represent a big threat.

KPMG’s recent ‘Offshore wind farms in Europe’ report notes: “It is clear that the current situation is extremely problematic.”

It calculates that by 2011...
suppliers will only have been able to meet some 36.7% of forecast cumulative offshore wind capacity — although it does put this at a staggering 16,792MW, which is far beyond reNews’ estimate.

In BVG Associates’ ‘UK Offshore Wind: moving up a gear’ report for the BWEA, the consultancy notes that only two suppliers, Siemens and Vestas, have built a “credible offshore pedigree”.

BVG forecasts that by end-2011 Repower and Multibrid will have established pedigree and by end-2015 it expects three suppliers from a pool of six others — including DarwinD, Bard, Clipper, GE, Gamesa and Enercon — to have entered the market and established a track record.

In the long term BVG is optimistic that booming onshore demand in international markets will eventually work in favour of offshore wind (so far it has done the opposite) as home-grown suppliers compete with current European majors.

“It is anticipated therefore that there will be growing readiness for European wind turbine suppliers to service the ‘home’ Europe-dominated offshore sector, where their advanced technology and experience can best be used to mitigate severe operating environments,” writes BVG.

There are other supply issues, too, including the availability of construction vessels.

Senior industry sources believe the market will “muddle through” in 2008 and 2009, bringing in vessels such as the Lisa and two new entrants.

JB109 and JB110 are being finalised by Jack-up Barge BV for next year to supplement the mainstay A2Sea vessels Sea Jack, Sea Energy and Sea Power, and MPI/Vroon’s Resolution.

After this things could get tight in an absolute sense, although Jack-up Barge is planning to build vessels JB116 and JB117 for 2010. By this time it is possible A2Sea and/or MPI/Vroon may also have invested in new capacity.

In the shorter term, though, while the industry might be able to get by, the small pool of suitable vessels adds friction to the market.

If and when things go wrong, like the crane incident on the Sea Jack and the spud can punch-through on the Lisa, already tight development schedules can be severely disrupted with obvious cost implications.

Also, the more farms that come on line the greater the service and maintenance requirement, and the history of the sector shows this will inevitably demand a proportion of the jack-up capacity.

Geographically, the UK is now the world-leading market and next year installed capacity in its waters (currently 400MW, or 404MW if you include Blyth) will surpass Denmark’s.

Germany still has the greatest potential and yet the sense remains that even after cable costs were passed to the transmission companies the...
This year will go down as one of the most positive in the short, turbulent history of the UK offshore wind industry, not so much for the level of capacity commissioned but more because of the foundations laid for the future.

The key development has been the introduction of banding to the Renewables Obligation, which gives offshore wind 1.5 ROCs per megawatt hour from 2009.

Crown Estate and the Department for Business Enterprise and Regulatory Reform this year also kicked off early work on Round 3. A scoping consultation on the exercise is due from government in early December.

The sweetened ROC, which according to KPMG makes the UK by far the most attractive market for offshore wind, comes as costs are rising, uncertainties and challenges remain over the offshore transmission regime, and the development process is taking longer and becoming ever more complex.

In a literal sense, 2007 has also seen foundations laid on two key projects, Lynn and Inner Dowsing and Robin Rigg, which in 2008 and 2009 will underpin a step change in UK offshore installation rates.

This year the 90MW Burbo Bank scheme was successfully commissioned by Dong Energy, and Talisman installed and commissioned a 5MW turbine at its Beatrice oilfield.

In this way turbine installation rates of around 30 units a year continued at roughly the same pace as seen in 2003 (North Hoyle), 2004 (Scroby Sands), 2005 (Kentish Flats) and 2006 (Barrow).

But next year, when Lynn and Inner Dowsing commissions 54 Siemens 3.6MW turbines, cumulative UK capacity will jump by nearly 50% with 194MW going on to the grid.

Developer Centrica reports solid rather than spectacular progress with 49 out of 54 foundations installed as of this week by the MPI vessel Resolution.

A spokesman said: “The interarray cabling is ongoing. All our onshore cabling is installed and work on our new onshore substation is progressing. Our intention is to install all 54 turbines next year with power from the first turbines being generated in the summer sometime.”

On Robin Rigg, Eon’s hopes of beginning on the foundations in September were sunk by an incident that damaged the installation.

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offshore

British break-out

to begin in earnest from 2010 on new awards under the planned third round of offshore licensing. This should inject a new wave of construction projects into the market from around 2015 and herald an era of rolling annual offshore wind licence awards.

Some of the least promising first round schemes, such as Cromer and Scarweather, and indeed the most challenging in terms of planning, such as Shell Flats, this year either fell by the wayside or started to look like they will never be developed.

The one exception here is EDF’s Teesside. After three and a half years in planning this 90MW project finally won government sanction this year and could be built in 2011.

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Beatrice Field, east coast of Scotland

The second offshore turbine with a total weight of 900 tons has been installed.

CONTINUED FROM PAGE 7

vessel Lisa. However, the construction project has real momentum in other areas and the company still hopes it can catch up on a relatively generous timetable targeting full commissioning by summer 2009.

A total of 60 Vestas 3MW turbines are planned, giving total capacity of 180MW.

A spokesman said: “The Lisa is still undergoing repairs in Belfast and she will be over when we’re happy that she is ready. We still hope to install piles this side of Christmas and we are looking into possibilities to supplement the Lisa with a second vessel.” It is understood Eon is talking to Centrica about chartering the Resolution to kick-start foundation work.

Next year will also see construction start on at least two other UK projects: npower’s 90MW Rhyl Flats and Dong’s 108MW Gunfleet Sands. These will ensure that the UK installation volume for 2009 is at least 378MW, almost exactly double that seen in 2008.

Whether 2009 turns into a bonanza year depends on whether CRC and Warwick can get the 300MW Thanet second round scheme built to meet its timetable despite the current hiatus imposed by Vestas.

The company has suspended sales of its V90 3MW turbine due to a major gearbox problem that has crippled the Kentish Flats farm. Thanet has a deal with Vestas for turbine supply.

Warwick says it is still hopeful but the sheer scale of the 100-turbine scheme dictates that it is going to be difficult to get it all commissioned by end-2009.

Looking further into the future, a serious pipeline of second round schemes including Walney, Greater Gabbard, London Array and Lincs will see construction in 2010, 2011 and 2012 keep up the momentum established in 2008 and 2009.

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British break-out

Talisman plants 1000MW seed off Scotland

Scottish and Southern Energy and partner Talisman Energy are exploring their options for a 1000MW commercial wind farm off the coast of north-east Scotland.

Their bullish outlook is the result of the successful commissioning of twin Repower 5MW turbines at the Beatrice offshore demonstrator in the Moray Firth.

A grid connection has already been secured for a potential 200-turbine project.

A promised strategic environmental assessment by the Scottish government, as well as Crown Estate licensing for the UK’s third round and a still-evolving consents process for offshore schemes in Scotland, will all play some part in when and how the scheme moves ahead.

Elsewhere, the Aberdeen Renewable Energy Group will soon erect a met mast to test conditions for its planned 115MW project off the Granite City’s harbour.

A full application for the 23-turbine wind farm is expected next year.

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Feed-in tariff tipping point in Germany

Developers spared grid bill so support level now key, reports Claudia Schiel

The country is due to take its first steps into the water next year with the first phase of the 60MW Alpha Ventus project at Borkum West.

Developers Eon, EWE and Vattenfall signed on Multibrid in June for the supply and installation of six M5000 turbines in 2008.

Aker Kvaerner is currently manufacturing six tripod substructures at its Verdal shipyard in Norway to support the hardware.

Delivery and installation is expected next July with erection of turbines and grid connection to follow through the summer.

Repower 5M machines are currently being built and will be installed in the second phase of the project.

Front runners on course to beat the 2011 grid deadline

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The OFW is also concerned that the planned feed-in tariff will begin to taper off in 2013 at a rate of 5%.

“Thus, which is higher than for any other technology, lacks any objective basis,” said Prall.

The industry group’s recommendation is to refrain from setting any rate, or date, until the presentation of the first field reports from initial offshore projects.

It wants to see shorter timescales for opting out of supports if developers wish to try the open market, some financial recognition of offshore wind’s role in providing grid stability, and an extension of the 2011 qualification deadline for getting projects into the water.

The latter element is part of a measure adopted last December that requires transmission system operators to build and operate connections for offshore wind farms that start construction before 31 December 2011. It also requires the TSOs to offtake wind power as a matter of priority.

The rule has transformed Germany’s offshore landscape.

In 2006, the environment ministry (BMU) and the industry spent more time pointing the finger of blame at each other than progressing work offshore.

BMU was disappointed by what it saw as a lack of pioneering spirit in the industry while developers said they would continue to concentrate their activities abroad as long as market conditions remained unattractive.

Improving those conditions through the feed-in amendment remains key.

CONTINUED ON PAGE 10
Germany is co-ordinating the planning process for offshore grid support, which means transmission cables can be bundled and then connected to the onshore grid via a few concentrated routes.

This simplifies planning, reduces costs and minimises interference with ecologically sensitive coastal regions.

E.On Netz and Vattenfall Transmission are currently analysing which farms are likely to start construction before the 2011 deadline. Initial results from the study show that North Sea capacity could be, with a very fair wind, as high as 3100MW, although Joelle Boullion from E.ON Netz said 1600MW is more realistic.

"Unfortunately, no regional allocation is possible because the project developers' declarations lack reliability," he explained.

First grid construction work in the North Sea started this summer.

E.On Netz is investing €300 million to build a 200km high voltage DC transmission line capable of handling 400MW from the Isle of Norderney to the onshore interconnection point in Papenburg. Horizontal drilling and 1.5km of ductwork will traverse the dikes and protective dunes on Norderney.

The Borkum 1 and 2 wind farm clusters will be connected via an offshore platform functioning like a multiple power socket.

The first cable will plug Alpha Ventus to the 110kV onshore transmission network. Complete commissioning of this first offshore extension is expected in 2008 at a cost of €74 million.

Another cable route will connect the Helgoland 1 and 2 clusters via Büsum to the transformer station at Brunsbüttel.

Bundling of transmission routes is not required in the Baltic. Distance to shore is not as great, there are no clusters and no national parks to cross.

As a result, Vattenfall Transmission is planning to construct project-specific cables, investing more than €700 million to connect the first four farms.

"The commissioning of four projects in the Baltic with an overall capacity of 1300MW is realistic," said the utility’s Meike Wulfers.

The developer is covering a crane to be called Wind Lift 1.

The project will be built in two of Alpha Ventus in 2009.

Outside of Borkum West there are now 15 approved projects in the North Sea and six in the Baltic.

Under current market conditions, however, only a few hopefuls are likely to make the 2011 grid deadline.

Bard Offshore was granted the go-ahead in April and in the first phase 80 turbines of 5MW will be installed 100km off the Isle of Borkum in waters around 40m deep.

The developer is covering a number of construction jobs in-house, which makes the planned commissioning around the end of the decade either more likely or more risky, depending on who is asked.

This June Bard placed an order at PC Western Shipbuilding in Klaipeda, Lithuania, for a jack-up with integrated tower crane to be called Wind Lift 1. The company has developed its own foundation system called Triple and expects to have its in-house 5MW turbine available.

Two prototypes of the Bard VM turbine were installed in October at the onshore Rysumer Nacken test field. Installation of the first commercial turbines at the Borkum 2 wind farm cluster is scheduled to kick off in spring 2009, although full operation is unlikely before 2010/2011.

Swiss company Renergys and German outfit GEO are firming up plans for the Nördischer Grund wind farm. A legal clash with the developers of Sandbank 24 ended with an agreement that will see Nördischer reduced to 64 turbines of up to 5MW.

The project will be built in the Helgoland 2 cluster around 86km from the Isle of Sylt and 108km from Helgoland.

The developers have yet to select a turbine manufacturer.
Horns Rev 2 construction to kick off as country prepares to test 10MW turbines

Front runners to beat deadline approvals since February and could be installed as soon as next year, although again it is likely to slip to 2009.

The first construction phase will see the installation of 51 turbines of 3.6 MW and the second 29 turbines of 5MW. Commissioning of phase one is slated for 2009-2010.

Baltic 1 lies 13km north of the Fischland-Darss-Zingst peninsula and will consist of 21 turbines of 2MW to 2.5MW each in water depths of 16m to 19m. Commissioning is pencilled in for before 2010.

Both wind farms will be connected with a joint cable to the onshore substation at Bentwisch near Rostock.

51.8 ore/kWh fixed-price support over roughly 12 years agreed between then-bidder Energi E2 (since merged with Dong) and the Danish government. It is thought the drawn-out negotiations reflect those financial constraints.

Danish company Semco Maritime has already started work on a design and build contract for a 24-person accommodation unit for deployment at the wind farm, the first such structure to be deployed in the sector.

The module, to be placed atop a monopile foundation, will be bridge-linked to the Energinet.dk transformer station and will host maintenance and overhaul staff during the summer season once Horns Rev 2 is operational.

Delivery of the 400-tonne structure, which is being built in Esbjerg, is scheduled for
June 2008. Foundations for the job are being provided by a joint venture of Aarsleff/Belfinger & Berger with delivery scheduled for spring 2008 and installation kicking off in June. Around 70km of cables are being supplied by Nexans. Full operation at Horns Rev 2 is on scheduled for late 2009.

Denmark’s next-generation project is planned for a site near the existing Nysted offshore wind farm. Eon Sverige will make a final investment decision on building the 200MW Rodsand 2 project before the end of this year.

Eon was granted the final go-ahead for the scheme late last month with construction slated to start in 2009 and full operation expected in 2010. Rodsand 2 will cover 35 square kilometres and when completed will provide 2% of Danish electricity use.

Foundations will be gravity base and along with other elements including turbines are currently being costed.

The developer will receive a set price of 49.9 ore/kWh for the first 10TWh of operation, or about 12 years. Energinet.dk, together with SEAS-NVE, has responsibility for providing grid infrastructure up to and including an offshore transformer station for the wind farm.

When complete Rodsand 2 will be Denmark’s 10th offshore wind project.

In the Baltic, German developer WPD and partner Wind-projekt are pursuing an “open door application” for an up to 455MW project in the Danish sector of Kriegers Flak.

WPD, which has already achieved consent with similar projects in the Swedish and German sections of Kriegers Flak, is hoping to investigate possibilities for an offshore development some 25km to the east of the island of Mon.

Elsewhere, Denmark is laying the foundations for installation of experimental offshore wind turbines as part of a wider initiative to pursue technological advances in the sector.

The Danish Energy Authority has nominated sites off Frederikshavn and in the Nissum Bredning for possible deployment of so-called Series 0 turbines, which would feature capacities of up to 10MW each and tip heights of at least 150m and up to 200m.

The offshore site at Frederikshavn, which is already home to four machines, could accommodate a further six turbines with no limit on total power.

The Nissum Bredning site, which is on an inlet along Denmark’s west coast, would require some grid reinforcement if a possible 10 machines are to break 40MW. The site is also home to existing turbines.

The first Series 0 machine could be up and running before the end of 2008, according to the DEA.

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CONTINUED FROM PAGE 11

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Finland tiptoes into the water

Finland has entered the world offshore market – just – with the installation of a trio of WinWind 3MW turbines on near-shore artificial islands in Ajos Harbour in Kemi.

The first phase development for PVO-Innopower includes two onshore machines and will be joined in phase two by a further five offshore units next year.

Elsewhere, Germany’s WPD has unveiled plans for a 400MW wind farm on Suurhiekka shoal in the Gulf of Bothnia. WPD Finland Oy is planning up to 80 turbines 25km east of Haukiputa.

Environmental work and permitting is already underway in a process that will last several years. Construction is not expected before 2012.

Also testing the waters is home side Fortum, which has set up a dedicated team to explore potential wind projects in its core Baltic Rim markets.
Sweden runs out of steam

Lillgrund set to go live but industry looking for more government help

The 48-turbine Lillgrund wind farm near the Oresund Bridge is the first new wind farm built in Sweden since 2001 and is likely to be the last until the country decides on the best way to support offshore projects.

All the Siemens 2.3MW machines are now in place at the Skr1.8 billion Vattenfall project between Copenhagen and Malmo. Full operation at the 110MW development is expected before the end of the year.

Contractors included Bladt for the transformer substation, ABB for installation and supply of array and export cables and Norwegian outfit Eide for installation of gravity base foundations built by joint venture partners Pihl & Sons and Hochtief.

Government officials are currently debating the best way to support future wind farms with many developers insisting that nothing will be built off the country until some mechanism is in place. Suggestions on the table are thought to include direct subsidies or changes to grid connection policies to match those in Denmark and Germany. A government committee is expected to report on the issues this month.

Eon Sverige has put its sanctioned 24-turbine Utgrunden II project on hold until baseline economics improve, while the 16-turbine Klasarden wind farm originally developed by GREP remains unsold. One source called the project “simply too small for today’s marketplace”.

Eon is seeking scale with the government last month granting permission to erect a met mast for what would be the 1000MW Sodra Midsjobanken scheme.

A grid connection application has been filed with a decision expected next year. Kriegers Flak, which Vattenfall purchased from German developer WPD in 2005, is likely to be a three-year build kicking off in 2013.

WPD, meanwhile, is considering a trio of projects on the Swedish side of the Gulf of Bothnia.

Foundations going in at Lake Vanern

The world’s first inland offshore wind farm entered construction this year with the installation of gravity base structures for phase one of the Gasslingegrund project in Lake Vanern kicking off this summer.

A total of four of the PEAB-built structures are due to be in place in 6m of water in western Sweden before the end of this year with a fifth to go in next spring ahead of turbine delivery next summer.

Finnish company WinWind, through Swedish supplier Dynawind, will provide 3MW turbines for both the first phase, which will go live next year, and the second 15MW phase, due to come on stream in 2009.

A2SEA, the market leader in offshore wind turbine installation, has now taken a giant step forward with the purchase of the jack-up barge SEA JACK. This addition to the fleet enables A2SEA to provide an extended range of construction services including monopiles and transition piece installation and to handle the next generation of wind turbines. Our flexible fleet including SEA ENERGY and SEA POWER, allows us to develop innovative solutions for the entire construction cycle from foundations to blades, providing the optimum solution for our Customers specific site requirements.

Talk to the experts - its an uplifting experience!
Irish developer scores rare permitting success in sea of wind farm proposals

Airtricity has picked up a second ‘preliminary licence for development’ off the Netherlands, snaring the exclusive rights to build the 350MW Breeveertien II wind farm off Ijmuiden.

The award from the Ministry of Transport, Public Works and Water Management gives the Irish developer the opportunity to carry out full environmental work and consultation, and, if successful, move towards construction.

Breeveertien II would feature at least 70 turbines in water depths of 19m to 25m. Construction is slated for 2012.

The scheme joins Airtricity’s 284MW West Rijn wind farm off Scheveningen and Evelop’s up-to-375MW Scheveningen Buiten in the same area as the only projects out of 72 proposed for acreage off the Netherlands to advance successfully to this stage.

The latest additions to an ever-growing list of proposals come from Dutch outfit Eneco Energie, which is involved in the Q7 wind farm. The company filed initial paperwork at the tail end of last month in support of seven schemes of between 151MW and 328MW each.

The clamour for offshore

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acreage is at odds with government progress towards support and indeed definition for the sector.

Government ambitions to have 450MW of new wind installed by 2010 are well-known but the means by which the target will be reached have yet to be established.

Previous promises of €1 billion have been dropped.

One government source indicated that while an as-yet-undefined financial support would be forthcoming, neither the amount nor the means by which successful developers would be judged has yet been identified.

“At some point all the names are going to go into a box and then developers will be drawn out as winners,” said the source. “My opinion is that whoever offers the cheapest price per MW will go forward in 2010.”

New plans are being drawn up for life after 2011, with an oil and gas-style licensing round the most likely approach.

In the meantime, no project is expected to receive final sanction for at least a year, and perhaps longer, as officials at the ministry work to finalise a series of baseline birds and habitats environmental studies that will apply to all prospective wind farms in the country’s offshore sector.

Q7 playing catch-up

The 120MW Q7 wind farm off the Netherlands is heading for operation next spring. However, the project is unlikely to meet original timetables of full power by March due to adverse weather conditions and well-publicised problems with its preferred installation vessel.

A2Sea’s Sea Jack returned to the 60-turbine job off Ijmuiden last week following a crane collapse in the summer and will be hoping to make quick work of erecting more than 30 remaining Vestas V80s. Storms permitting, all the machines are now due up by early next year.

Econcern, Eneco and Energy Investment Holdings are developing the €380 million project with marine constructor Van Oord leading the on-water charge.

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Onshore cabling and the manufacture of gravity base foundations are underway for Belgium’s first offshore wind farm. Full operation of the 30MW first phase of the Thorntonbank project is expected by autumn 2008.

Repower will provide six of its 5MW turbines to the C-Power development, with Dredging International leading the construction, installation and, in the case of the foundations, fabrication of the remaining elements.

A pair of Dredging jack-ups will be mobilised to the site 46km from shore next June to install the wine-glass shaped gravity bases in 23m of water. The turbines are due to arrive in August and September.

A second phase of 18 5MW turbines is scheduled for 2010 while a final phase of 36 turbines will go forward in 2011. C-Power holds an option with Repower for supply of the headline hardware.

Next into the water is likely to be Econcern subsidiary Belwind, which is hoping to reach financial close on its 330MW Bligh Bank wind farm early next year.

Geotechnical work and seabed investigations have been completed for the 66-plus turbine development with negotiations already underway to secure long lead items. Construction in up to 35m of water 40km from shore is scheduled to start in 2008 with full operation in 2010.

Elsewhere, development consortium Elnepasco is hoping for final sanction on its 36-turbine Bank zonder Naam wind farm in the near future with hopes of moving forward with the 216MW scheme off Knokk-Heist in the early part of the next decade.

Elnepasco includes renewables outfit Aspiravi, supermarket group Colruyt, marine construction company Depret, and renewables developer Electrawinds. The scheme is expected to cost €500 million.

One shot at French glory
Construction work for France’s first project at Cote d’Albatre is provisionally scheduled to start in the waters off Normandy next year.

Norway’s Aker Kvaerner has begun fabrication of seven tripod foundations for Enertrag and Multibrid’s 21-turbine scheme, which will total 105MW when complete. Delivery of the bases is expected next September, although whether installation will take place in 2008 or 2009 remains a question. Aker is targeting a contract for the remaining 14 tripods for 2009 but this has yet to be placed.

Cote d’Albatre will be built in 30m of water near the coast between Le Havre and Dieppe.

A promised licensing round has failed to materialise so far, leaving investors such as Shell, Total and Gamesa with little to show for what are thought to be ambitious plans.

Ball gets rolling in Belgium
Spain is paving the way for up to 3000MW of offshore wind by 2020 via a new licensing system scheduled to be in place for late 2008.

The new regime will open up parts of the country’s 4000km coastline to development, based largely on the results of an impact study expected to be completed by next July.

Sources active in the country said the new system is likely to force smaller players out of the Spanish offshore, leaving big companies including Acciona, Endesa and Gamesa joint venture Capital Offshore both to pursue long-standing schemes off Cabo de Trafalgar as well as new projects elsewhere.

Construction work for France’s first offshore wind farm...
NaiKun Wind Energy goes into an upcoming competition to provide green energy to British Columbia knowing a successful bid could see the developer leading the race into the waters off North America.

BC Hydro is expected this spring to ask for bids totalling more than 5000MW in a move that will dovetail with provincial government ambitions to produce a net of zero greenhouse gas emissions by 2016.

Several green technologies are likely to win awards next summer. NaiKun, expected to be the only offshore bidder, is confident that its proposed 350MW first phase wind farm off the Queen Charlotte Islands will find favour.

The C$1 billion project in the Hecate Straits could kick off preliminary construction in the summer of 2009. The first loop of 3MW-plus turbines is scheduled to provide power via a grid connection to the mainland in 2010. Full operation of the first phase is pencilled in for 2011.

Geotechnical work including seabed surveys for the wind farm and the cable route have been carried out this year with no real surprises. Foundations are likely to be monopiles.

Bird surveys are due in spring and summer next year with the submission of a final environmental impact statement in autumn 2008. NaiKun hopes to translate that paperwork into final approval by spring 2009.

A met mast is already on site. NaiKun erected a Zephir unit purchased from Scottish company Natural Power in September. The tower also features wave, current and scour measurement equipment. Data are being relayed to GL Wind Test in Germany as well as Axys in BC, with the entire system powered by four Ampair 600w wind generators.

Project partners at NaiKun include Alberta energy company Enmax.

Elsewhere in Canada, several projects planned for the Great Lakes have been postponed or abandoned following a moratorium imposed on development last year.

The Ministry of Natural Resources is conducting studies into potential environmental impacts, leaving Trillium’s 700MW scheme on Lake Erie and Toronto Hydro’s 60MW project on Lake Ontario on hold.

NaiKun fancies its chances in renewable power race

British Columbia call for bids opens the door for potential North American first

100MW Shanghai project to open the show

China could see its first commercial-scale offshore wind farm throw the switches in 2010 at a 100MW scheme off Shanghai.

Official information on the Donghai Bridge project remains slight but it is understood foundations will begin to go in next year with turbines following either concurrently or the following season.

Turbines are likely to be Chinese-built 1.5MW units to be installed in waters up to 10m deep east of the bridge, roughly in the middle of a 20km-wide waterway.

Partners include China Datang, Guangdong Nuclear Wind Power, China Power New Energy Holdings and Shanghai Green Energy. A feasibility study was carried out by Industrial Info Resources of Texas.

Elsewhere, CLP Holdings and UK partner Wind Prospect have boosted the total size of the planned Hong Kong Offshore Wind farm to 200MW before submitting environmental work next year. Feedback from major stakeholders has been described as broadly positive and technical issues such as the grid connection are starting to fall into place.

An offshore met mast will be erected in spring 2009 at the site using suction caissons, a technological first for Hong Kong that has therefore taken longer to reach approval. Construction of the scheme in 30m of water is currently targeted for 2011/2012.

The prospects for wind farms off Fujian province are being considered as part of the China Renewable Energy Scale-up Programme in co-operation with the World Bank and the Global Environment Facility.

The £20 million study is led by Scottish company

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Political crapshoot is taking a savage toll on US projects

It’s a case of one step forward and two back in the US offshore sector with the notable exception of Cape Wind, whose plans for a 130-turbine wind farm off Massachusetts are likely to get a boost shortly.

 Officials at regulator the Minerals Management Service are due to release a long-awaited draft environmental impact statement for the 420MW scheme later this month, laying the foundations for final approval in the third quarter of next year. A Cape Wind spokesperson said: “We think we can detect light at the end of this tunnel.”

If it gets the green light offshore work will start in 2010 with turbines arriving in a two-season stretch from 2011. GE has long been in the frame for the plum job, although the developer said Vestas and Siemens remain in discussions.

A project off New York state that at one time harboured ambitions of beating Cape Wind to the punch is now out for the count.

There has been no official cancellation of the 40-turbine scheme but senior staff at the Long Island Power Authority have made it clear progress under the terms provisionally agreed with developer FPL Energy are unacceptable.

Also off the radar screen are plans for a 500MW wind farm off Padre Island in Texas. Babcock & Brown pulled the plug soon after taking control of original developer Superior Renewables.

Louisiana outfit Wind Energy Systems Technologies erected a met mast off Texas but dropped plans to put a 1.5MW demonstrator turbine atop a disused oil platform. That will now wait until at least next summer if not longer.

The company remains bullish about prospects off Texas and recently signed a deal with state officials for right to build 300MW wind farms in four locations.

Timetables are long term.

Bluewater Wind is locked in state-wide wrangling over its ambitions to build a 450MW scheme off Rehoboth Beach in Delaware. The developer, high-profile politicians, action groups, utility Delmarva, and the Public Service Commission will all have some say in any final decision.

Bluewater, as well as newcomer Alco Renewable Energy Group, is also looking at the possibility of building projects off Rhode Island as part of that state’s ambitions to produce up to 15% of its electricity from green sources.

Plans are at the early stages for locations off the Massachusetts town of Hull, in the same state’s Buzzard Bay, on Lake Erie off Cleveland, off the Georgia coast and (again a potential Bluewater target) off New Jersey.

SgurrEnergy and will look at methods of providing cost-effective and commercial renewables off the south-east coast of China.

Oil company CNOOC earlier this year claimed to be installing the first offshore turbine in the region. However, it is understood a 1.5MW machine will be erected atop an existing hydrocarbon facility, prompting some debate about whether this truly qualifies as “offshore”.

Sources predict China’s offshore sector will remain essentially in demonstration mode until around 2015 when current prototype turbine technology of 3MW to 5MW reaches maturity.

“At least three Chinese manufacturers expect to have prototype 3MW-plus turbines specifically designed for the offshore market commissioned before 2010 with a view to having commercial production soon after,” said one source.

“Together with efforts being made on the feasibility study side of things, this probably signals a big push in offshore in a 2013 to 2025 timeframe,” he added.
Microgeneration ‘a must for zero carbon agenda’

A new report from the Renewables Advisory Board has calculated that the UK government’s ‘zero carbon homes policy could drive a market for on-site generation worth £2.3 billion a year from 2016.

The report, produced by Element Energy for RAB, finds the electricity load created by appliances means that renewables are essential to meeting zero carbon standards even where homes are built to the highest levels of energy efficiency. It identifies biomass CHP and solar photovoltaics as the key post-2016 technologies.

The RAB makes three main recommendations to government. First, change policy to create earlier stimulation for on-site renewable energy, for example by encouraging local authorities to use the planning system to require zero carbon standards in the largest housing developments in advance of 2016.

Second, accelerate the technological and commercial development of biomass CHP, for example by making deployment of the technology a priority of the Environmental Transformation Fund.

Third, minimise the use of remote off-site energy generation in meeting zero carbon standards by setting a tight cap on its use and a high “buy-out” cost for any off-site generation fund.

RAB microgeneration working group chairman Matthew Spencer said: “The zero carbon policy is long-sighted and bold, and could produce big environmental benefits in existing and new homes if it is used to accelerate the development of decentralised energy services and technology.

“However, the government’s current timeline postpones much of the hard work until 2016 with little opportunity to learn or build capacity in the UK on-site renewables sector in the next eight years.”

He said if this is not addressed it could slow housebuilding but there are options to overcome this supply gap. “These include using the planning system to require earlier uptake of renewable energy in larger housing developments,” said Spencer.

The Renewable Energy Association welcomed the report and, among other things, called for the introduction of a “generous feed-in tariff for on-site renewable electricity along the lines of the scheme that has been successful in Germany”.

SNP budget backs the ‘greening of Scotland’

The Scottish National Party’s first budget in government has outlined “support for delivery” of a greener Scotland, including a revised renewable generation target of 50% by 2020 and 31% by 2011.

Also on the menu is a Scottish Climate Change Bill, support for 10MW of marine renewables by 2010, a three-fold rise in support for microgeneration to £13.5 million by 2010/11, and an “ambition” to cut greenhouse gases by 80% in 2050 over 1990 levels.

The nationalist government also unveiled a £10 million Horizon Prize to fund innovation in the renewables sector to sit alongside the already launched annual £2 million Saltire Prize.

Cabinet Secretary for the Environment Richard Lochhead said: “The investment will be targeted to help us make much greater use of our substantial renewable energy resource and to reduce the climate change emissions from transport, housing and business.”

Other measures include £154 million to push Scotland closer to becoming a zero-waste society, £45 million for new carbon-sink woodlands, and £30 million for a new Sustainable Development and Climate Change Fund.

Climate bill curtain up

The UK government this week introduced a “world first” 50-year Climate Change Bill that will lay the groundwork for a low-carbon economy with clear, legally binding targets to reduce emissions by at least 60% by 2050. The bill also calls for interim cuts of 26% to 32% by 2020 based on 1990 levels.

Other elements of the legislation include a series of five-year carbon budgets, set 15 years ahead, to “give investors and policymakers certainty and direction”. Also included is the establishment of a Committee on Climate Change, a new system of “transparent” progress reports to Westminster, and the introduction of new emission trading schemes.

US cap-and-trade coup

Six states in the US Midwest as well as the Canadian province of Manitoba have signed a pact to implement a cap-and-trade system for greenhouse gas emissions.

The Midwestern Regional Greenhouse Gas Reduction Accord is aimed at multiple sectors including electric utilities and will be “consistent with the 60% to 80% recommended by the Intergovernmental Panel on Climate Change”.

A further two states joined in an energy strategy aimed at boosting biofuels, boosting the use of renewable electricity and improving transmission infrastructure.
Scottish contenders have new prize fund to chase

Scottish Enterprise is launching a new competitive fund for the country’s wet renewables sector that will support up to 50% of project development costs.

The agency confirmed that large or small-scale applications would be considered from those already active in the business as well as from companies using technologies adaptable to marine renewables, such as oil and gas outfits.

Areas earmarked for potential investment

Islay run-out for turbine

Wavegen is preparing to pilot test a new turbine on Islay as part of npower’s 4MW Siadar Wave Energy Project.

The modified Wells turbine, which will be installed at the existing Limpet facility on the Scottish island, should be ready to begin testing at the start of 2008.

Wavegen general manager Dave Gibb said: “We are applying modifications to the turbine that have been derived from computer analysis.

“We will run the initial tests with the aim of confirming the performance of the improvements, followed by longer-term testing for up to a year to establish and verify essential reliability.”

The programme is backed by Scotland’s Wave and Tidal Energy Support scheme.

Navigation help on offer

The Chamber of Shipping is encouraging marine renewables developers to come to the table as early as possible when planning installations off the UK.

Speaking at the Scottish Renewables marine conference in Dundee earlier this month, the chamber’s nautical consultant Ian Trebinski outlined the navigational risks posed to shipping by offshore renewables.

“From a development viewpoint we can help, perhaps identifying potential sites that are good but others could be problematic from a shipping perspective.”

Oyster team gets ready for bed at EMEC berth

Aquamarine and the European Marine Energy Centre expect to finalise a contract for the installation of the developer’s Oyster wave power converter (right) on Orkney before the end of the month.

The company has all the necessary planning arrangements in place with the development only awaiting Maritime and Coastguard Agency consent before the go-ahead.

Work to connect the device to the EMEC wave facility at Billia Croo should kick off in early 2008, the first new unit to go in at the test centre since the OpenHydro machine.

Both the base frame and oscillating sections are now fully fabricated, and are being painted at Isleburn Mackay and Macleod’s facility at the Nigg yard north of Inverness.

Aquamarine has redesigned the Oyster foundation installation system to be less weather critical.

The company’s research found that longer weather windows are becoming more erratic at EMEC, necessitating installation platforms that can operate in more challenging seas.

The 300kW to 600kW Oyster will be deployed in a near-shore area off Orkney, rather than the deeper water more usually associated with wave devices.

Aquamarine is now two years into research to develop the Oyster’s capacity to pump seawater directly into desalination stations. The company has partnered with the Institute Technology Canaria on the development.

Meanwhile, following its merger with SSE subsidiary Renewable Technology Ventures Ltd, Aquamarine is working to finalise the engineering design of the 2MW Neptune tidal device.

Construction of a full-scale unit is scheduled for 2008 with deployment at EMEC’s tidal facility pencilled in for 2009.

Briefs

- Simon Meade has parted company with tidal company Lunar Energy to set up on his own. The former chief executive was unwilling to comment on his departure, but a spokesperson for Lunar said: “Simon Meade left to promote his own financial consultancy and we wish him well.”

- They separated on amicable terms, the spokesperson added. The now ex-CEO had overseen developments at the company since 2002. No replacement has been named.

- Irish-Canadian outfit Finavera Renewables has elected to leave its sunken Aquabuoy 2.0 in the water until it can be safely retrieved, suggesting the device could remain on the seafloor off Oregon until after the winter.

- The wave energy converter suffered “buoyancy issues” towards the end of its recent test programme and was lost in the seas off Newport. Finavera said the information gathered from the buoy before it went down would lay the foundation for the next generation device.

- It would also “accelerate the route to commercialisation”.

- Finnish utility Fortum has acquired an 8.4% share of AW Energy, the compatriot company behind the WaveRoller device. A prototype is already installed in Peniche, Portugal.