DAY TWO

EWEA 2015

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

GE cautious on offshore turbine factory

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E would need a solid pipeline in place before building a full-scale offshore turbine in the US or elsewhere Europe, it tells *Recharge*, as it ned it is integrating offshore s an operating unit after the ($10.3bn) acquisition of 's energy assets.

US company used EWEA 2015 t its enlarged GE Renewable operation, now upgraded to a siness division following the deal from its previous status GE Power & Water.

French company expands GE's global renewables fleet to more than 30,000 turbines and enlarges its European "footprint" by 50%.

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

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

GE had previously ventured into offshore in a much more limited way, supplying the 25MW Arklow Bank wind park in the Irish Sea in 2004 and buying Norway's ScanWind in 2009, but eventually deemed further activity in the sector unviable.

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

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

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

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

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Low-cost floating turbine concept unveiled

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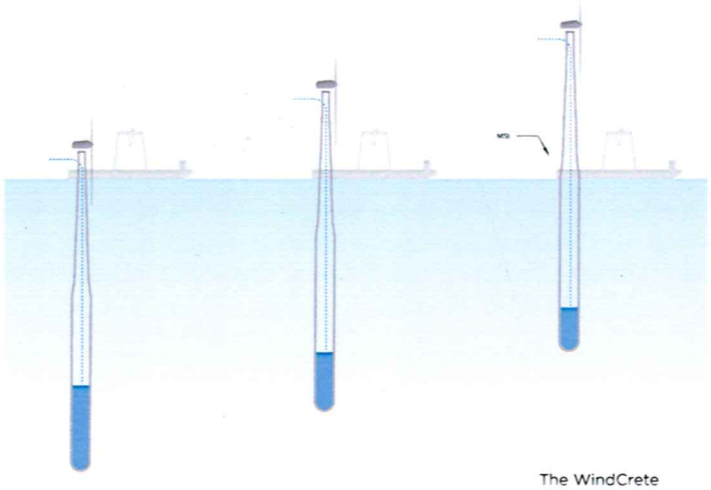
A floating wind turbine concept that could slash the cost of energy (CoE) of deepwater units to €120 per MWh has been unveiled by researchers at Spain's Universitat Politècnica de Catalunya (UPC).

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

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

Building costs are calculated to be 60% lower than steel designs, with the use of concrete making the WindCrete more resistant to harsh offshore conditions and giving it "fewer maintenance requirements" over a 50-year lifespan.



The WindCrete design

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

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

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

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

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

Photograph | UPC