

## Europe Manufacturing

# Clipper sets sail for UK

Blades for giant 10MW Britannia turbine to be built in England after government chips in \$7.3m

**BEN BACKWELL**  
LONDON

**U**S wind turbine-maker Clipper Windpower will build a factory in the northeast of England to manufacture blades for its giant 10-megawatt (MW) Britannia offshore wind turbines.

Clipper will occupy a new 4,000-square-metre facility, which will be situated on the River Tyne, from the start of April 2010. The plant will employ 60 people by the end of the year.

The UK's Department of Energy and Climate Change (DECC) has announced an award of £4.4m (\$7.3m) under its Low Carbon Energy Demonstration capital grants scheme for the project, which it hopes will kick-start a domestic turbine industry for the UK offshore market.

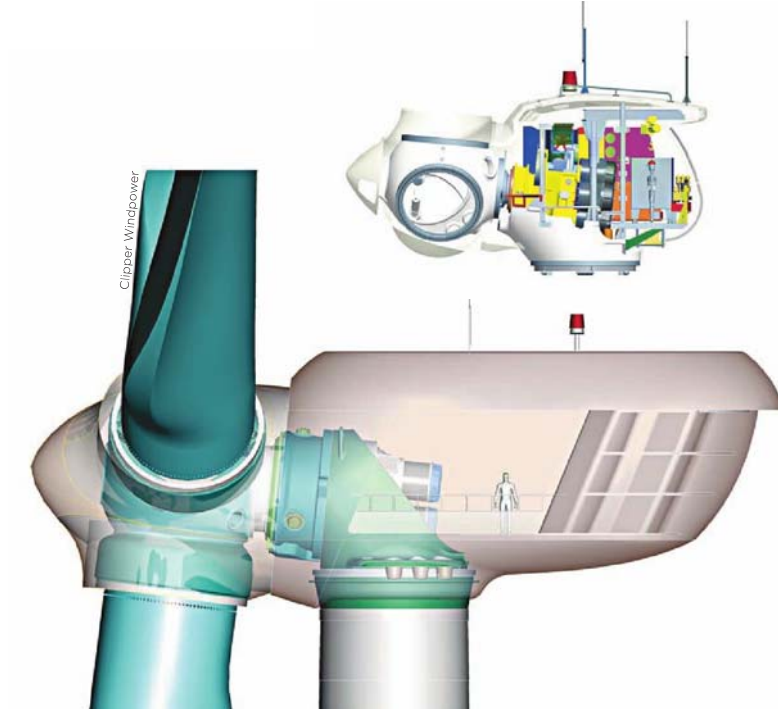
Clipper Windpower chairman James Dehlsen says: "With the deployment of the 10MW Clipper offshore turbine in UK waters, the nation will benefit from clean power, and also from the strong economic boost arising from the development and serial production of the turbines in the coming years."

He says the DECC grant programme "will help to accelerate our planning for, and delivery of, the Britannia Project".

The government says Clipper plans to "utilise fully the emerging UK supply-chain opportunities" in developing the manufacturing process for the 10MW turbine, which will be deployed initially in European waters once serial production begins.

The company says it is working with the DECC and the UK Trade & Investment body to identify opportunities for local materials and component supply. But it adds: "Due to the breadth and scale of the wind turbine, world-wide materials and component supply will also be required."

Energy and Climate Change Secretary Ed Miliband announced the Clipper grant and two other awards at the Trades Union Congress conference in Blackpool. He says: "We already have more offshore wind energy



**TO SCALE:** Cross-sections of the 10MW Britannia, *bottom*, and Clipper's 2.5MW Liberty turbine, *top*

than any other country. We have the biggest wind farm in the world about to start construction, and now we'll see the biggest turbine blades in the world made here in Britain.

"Our coastline means the offshore wind industry has the potential to employ tens of thousands of workers by 2020,

manufacturing, transporting, installing and operating new turbines." He adds: "It will take an active government to get us there, and the funds I'm announcing today are part of the £120m investment we are making this year and next in the wind industry to make that happen."

The Crown Estate, which is

organising the UK's Round 3 offshore wind tender, is supporting the project and has an agreement to purchase the Britannia prototype to gain first-hand knowledge of the challenges facing the development of specialised wind turbines for use in deep water. The Britannia Project is also being supported by a £5m package from regional development agency One North East.

Testing of the turbine's sub-assemblies began this year and will continue through 2010, with full drivetrain and blade testing scheduled in early 2011. Testing is being conducted in conjunction with the New and Renewable Energy Centre in Blyth, Northumberland.

In late 2011, a Clipper 10MW offshore prototype will be erected on land. A fully operational Clipper 10MW turbine will stand 175 metres tall, while each blade will be more than 70 metres long and weigh over 30 tonnes.

## Siemens and Artemis also win grants

The UK government is also making a £1.1m (\$1.8m) grant to Siemens Wind Power UK to develop next-generation power converters for its offshore turbines, and a £1m award to Artemis Intelligent Power to transfer its existing technology from automotive to wind energy.

Andreas Goss, chief executive of Siemens in the UK and northwest Europe, says the support "will enable us to develop our advanced power-conversion technology here in the UK, helping growth and job creation in the UK wind industry to become a reality".

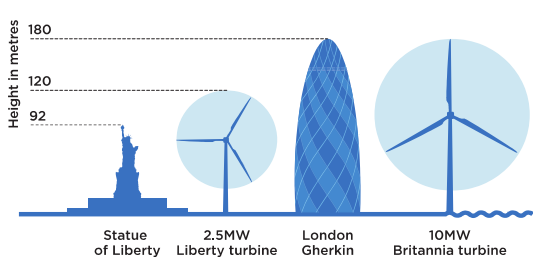
Siemens is currently considering the UK, along with Germany and Denmark, as the site for a planned plant for its 3.6-megawatt (MW) offshore turbines. Siemens Wind Power chief executive Andreas Nauen hinted recently that the UK is the front runner for the plant, as it is moving forward with offshore development faster than the others.

The government's first £10m funding round under the Low Carbon Energy Demonstration capital grants scheme was launched on 28 May. It is aimed at developing the UK supply chain for offshore wind generation by supporting development of new technology to help ensure the deployment of large multi-megawatt wind turbines within "2020 timescales".

Last month, Vestas was the first beneficiary of such a grant – £3m for its Isle of Wight blade-technology research and design centre – despite the political damage caused by its decision to shut its blade-manufacturing operation in the UK in August.

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## Just how big will the Britannia be?



## Finland Joint venture

### Fortum and state landowner get cosy to develop wind farm in freezing Lapland

**ANDERS BJARTNES**  
OSLO

Finland's main power utility, Fortum, is teaming up with big landowner Metsähallitus to

develop a 40–50-megawatt (MW) wind farm in Finnish Lapland.

Fortum and Metsähallitus have jointly begun developing a project for 18 turbines of 2MW–3MW each, to be located in the

Kuolavaara-Keulakkopää area of northern Finland, which has been designated a wind-power area. Metsähallitus is a state enterprise that administers more than 12 million hectares of

state-owned land and water areas.

According to initial estimates, the wind farm will produce 100–120 gigawatt hours a year.

An environmental impact assessment, along with

further wind measurements and technical pre-planning, will take place this autumn.

If the project proves feasible and permissions are granted, production could start by 2013.