



## Offshore wind farm construction - more pictures

Posted by [Jerome a Paris](#) on March 8, 2010 - 10:10am

Topic: [Alternative energy](#)

Tags: [offshore wind power](#), [wind power](#), [wind turbines](#) [[list all tags](#)]

After showing you pictures of offshore wind turbine foundations in [this story](#), I am pleased to be able to now post pictures of the above-the-water parts, before their installation at sea:



*Left: nacelles with the hubs being installed*

*Right: blades (45m long) stacked*

Part of the [Wind power series](#). More below:

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If you remember, there were ovality issues with one foundation last time round - well, that was solved and that foundation has now been corrected and installed at sea. The foundation site has just one big item remaining:



*the transition piece for the offshore high voltage transformer station*

This transition piece is heavier than the others, and required a re-fit of the jackup barge to be installed. That refit was being done when we visited:



*Left: two of the legs that go down in water to lift the platform above the water when it needs to work*

*Right: the jackup is in the "raised" position in order for the re-fit work to be done in perfectly stable conditions, even in the port*

After installing the foundation for the transformer, the vessel will be refitted a second time to begin in a few weeks' time the installation of the towers and turbines, which are arriving at a nearby site:





*the nacelles (Vestas V90 - 3MW)*





*the hubs*







*the blades*



*the first part of the tower*

The installation method chosen for this project is to install the turbines with the hub (but not the blades) on top of the towers (which are brought in two parts and are assembled on site) onshore, and transport the full unit to the site at sea in one piece, in a vertical position. Thus, other than the installation of that unit on top of the foundations, the only work offshore will be the installation of the blades, one by one, on the hub.

On the port site, various bits of assembly are happening now: the towers are being erected:



*The fully erected towers stand at above 100 meters*

The hubs are being attached to the nacelles:



*The hubs are first positioned alongside the nacelles*





*after having being raised into position (something I did not witness), the hubs are bolted to the nacelle*



*a complete nacelle + hub set in front, with one to be installed behind it*

I hope to be able to post more installments in the future - but joining the installation work at sea

is usually more difficult as the safety requirements are absolutely stringent and the boats can be mobilised for more than a few days... to be continued.



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