Wind energy 2006

A discussion document.

Given the following:

That Wind turbines with wings of about 45 metres have reached the limit of their development and are in short supply.

That conglomerations of fifty or more Wind turbines are designated a Power station and that envisaged stations of 125 units to 300 units are meeting great opposition.

That the wind is unreliable in any area at any one time.

That some cruise liners carry five or more very large fabric sails.

That metal aerofoil sails have been successfully employed to drive ships

That ship sails of both kinds are usually computer controlled.

That structures such as the Forth Railway Bridge, the various road traffic suspension bridges, the London Eye, the Wembley Stadium roof support arch and the Falkirk wheel are all working well.

Then:

I suggest that we have the know-how to build a new class of wind power generation based around a very large horizontal wheel. For example a machine with a diameter of about 600 metres and 100 sails. Whether generators are mounted centrally or peripherally or at stations in between should be left for resolution at the design stage.

Such compact machines might be spread around windy sites in the UK so that the chances of a no wind condition will be greatly reduced. But the addition of a diametric pair of engines at the rim would enable the machines to function irrespective of the wind and therefore be independent of other traditional power stations.

As to how the machine is actually constructed, for example whether there is a central support or rim support or whether the sails are triangular or rectangular is not an issue at the moment. What is important is to start thinking of a much larger scale of machine fitted into a comparatively small space for wind energy capture.

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