

In recent years, due to the global energy crisis, increasingly more countries have recognized the importance of developing clean energy. Offshore wind energy, as a basic form ...

In this work, beneficial IBA configurations are first identified using linear monopile and spar-buoy wind turbine models. The performance advantages will then be verified by using OpenFAST, a nonlinear aero-hydro-servo-elastic ...

As the most distinguishable difference between FOWTs and floating O& G platforms, aerodynamic loads play an important role in the dynamic response of the wind turbine system, and the power generation performance ...

[17][18][19][20] However, less attention has been paid on how the wind turbine rotor affects the cooling performance of a wind turbine, which should be a critical concern for the efficiency and ...

The share of wind-based electricity generation is gradually increasing in the world energy market. Wind energy can reduce dependency on fossil fuels, as the result being attributed to a ...

Power losses due to complex interactions of wind-turbine wakes in wind farms call for the development of new effective wake mitigation strategies. A promising approach for achieving this goal is to intentionally hinder the ...

4 ???&#0183; The THD index is also used in this study to analyse the performance of wind and wave energy generation on the smoothness of power at the selected locations with Eq. (10). ...

For the 5 MW wind turbine with a direct-drive generator, the generated rated power should be 5.56 MW, while the generated rated power for the conventional geared power system is 5.29 ...

4 ???&#0183; The performance of the wind and wave energy generation is affected by the future climate change scenarios, where the wind energy generation is found to be more stable than ...

The daily dispatch profiles show relatively constant offshore wind (blue) and wave power (magenta) generation, decreased dispatch of solar energy (yellow) and energy storage ...

Integrating wave energy converters (WECs) onto floating offshore wind turbine platforms has emerged as a recent focal point of research aiming to achieve synergistic marine energy ...

Fig. 25 compares the power performance of the multi-buoy WEC in the cases with different incident wave angles, i.e.  $0^\circ$ ,  $151.25^\circ$  and  $180^\circ$ . Both the linear and coulomb ...

via the power electronics converter. Power The power available for generation will be a function of the wind speed and was originally presented by L. Vita in [1], see Fig. 2. The output power to ...

For an electrode diameter of 6 cm and surface potential of -3000 V, the short-circuit current peak can reach 0.7 mA. Experimental tests were conducted on each component of the composite ...

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