Wind turbine blade steering

Utilizing advanced computational tools like OpenFAST and FAST.Farm, this study consisted of a dual analysis of single-turbine configurations and multi-turbine setups with varying ...

Yaw misalignment is known to affect blade root loads on wind turbines. Most of previous studies concentrate on yaw misalignment in the context of wake steering control, aiming at ...

Pointing turbines slightly away from oncoming wind -- called wake-steering -- can reduce that interference and improve both the quantity and quality of power from wind farms, and probably ...

We demonstrate different blade design optimizations that can maximize time-averaged lateral wake deflection, entrainment of kinetic energy, or total power of multiple turbines.

This study provides initial insights into the effects of wake steering control on wind farm power output and turbine loads; however, several limitations should be addressed in future research.

Using the FLOw Redirection and Induction in Steady State (FLORIS) engineering wind farm control tool, we compare the performance of standard and preview-enabled baseline and wake-steering control ...

The first professional hurdle in wind turbine blade transport is vehicle selection nventional trailers cannot handle blades over 80 meters, so projects typically use telescopic blade trailers or ...

In this short video, we demonstrate the simulation of 12 wind turbines in a farm setting, highlighting the effectiveness of wake steering. The wake steering is enabled through a slight yaw ...

We then use this method to simulate wake steering by means of fixed pitched blades and struts. We demonstrate that combining pitched wakes and struts can lead to very advantageous wake behavior, ...

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