

Topic

Numerical investigation of a novel blade for use in vertical axis wind turbines

Candidate's name

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100 word description

Wind energy is becoming a dominant player in electricity generation. With a global trend towards offshore farms the scale of wind turbines is increasing. Vertical axis wind turbines are predicted to play an important role offshore based on their design advantages. This study showed the possibility of increasing the life cycle of a wind turbine by adjusting the lift and drag coefficients of the turbine blade during operation. This was achieved through the implementation of a bio-inspired blade. This novel blade reduces the alternating torque experienced by the drive train allowing for an estimated 36% increase in life span.