

Increased Blade Inspection Safety

Publieke samenvatting / Public summary

Aanleiding

Wind energy is an essential technology to realize the transition to a sustainable energy system. However, maintenance and operation costs form a relatively large part of the total investment and operating costs of a typical offshore wind farm. Due to the remote location and towering size of the typical wind turbine, inspection and maintenance is laborious and time-consuming, and thus expensive and dangerous.

Doelstelling

The use of remotely operated or automated systems can provide a way to realize both safer and cheaper offshore wind energy. SpectX and TNO seek to realize this goal by combining automated drones and digital monitoring and modelling.

Korte omschrijving

Drones with X-ray equipment have the potential to deepscan wind turbines remotely for cracks and defects that might form during operation. In addition, a virtual rendition of an actual wind turbine can monitor the current maintenance requirements of a turbine based on sensor information. By combining the scanned data with computer modelling, the impact of defects can be predicted. Based on these predictions, additional inspections and/or interventions can be scheduled in an early stage of damage, required for improving on the effectiveness of interventions. Ultimately this also allows for large maintenance like replacement of parts to be scheduled appropriately and efficiently.

Resultaat

Projectinformatie / Project information

Projectnummer / Project number

TKIOE_WOZ_2305_OpenCall_IBIS

Subsidiebedrag / Grant amount

€ 100.000,00

Algemene informatie / General information

Penvoerder / Secretariat

SpectX

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Such remote monitoring and predictive maintenance modelling are a way to significantly reduce the manhours spent on site at offshore wind farms, thereby increasing the operational safety.

De data in deze applicatie is afkomstig van de Rijksdienst voor Ondernemend Nederland (RVO) en wordt in samenwerking met de Topsector Energie ontsloten.

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