Programme Area
Offshore Wind

energy technologies institute

Condition Monitoring - Key Findings of a holistic approach to wind turbine monitoring report

A holistic predictive Condition Monitoring System (CMS) was developed and trialled on 4 onshore wind turbines

Multiple sensing technologies enabled prognostic information relating to the fatigue of components in the drivetrain and for blades.

The niche for a holistic monitoring system is as a set of advanced data fusion tools, fault logic and cross farm analysis sitting at the fleet-wide central database

The use of prognostic damage models provides additional information to support inspection and maintenance optimisation

Additional benefits of 0.8p/kWh saving could be realised compared to a conventional CMS system

The introduction of SCADA fault algorithms could be used to detect pitch and yaw misalignments