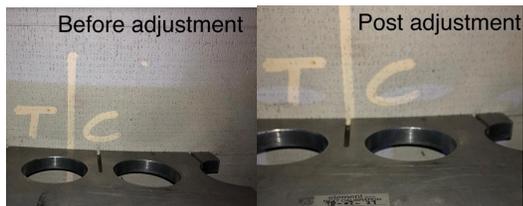


Successful Rotor Aerodynamic Imbalance Campaign with ERG

ERG and Sereema have been successfully collaborating for 3 years now to improve performance on wind farms under Windfit monitoring. Here, we share one of the typical findings where the cause of the underperformance was linked by Windfit to a rotor aerodynamic imbalance. The system was then used to follow-up on the correction brought up by Vestas.

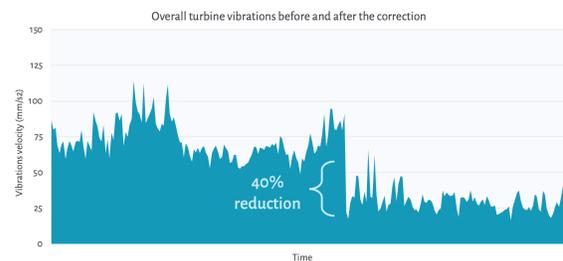
On one of the turbines, the 3 blades were found to be misaligned from its 0° mark by up to 1°. Realignment had a direct impact on production.



To quantify the impact that a severe aerodynamic imbalance has on a turbine, the overall vibrations on the turbine measured before and after the event are compared.

A 40% reduction is visible, showing how critical it is to continuously monitor rotor imbalance to preserve the lifetime of wind

turbines. The correction of this aerodynamic imbalance is expected to increase this turbine output by an estimated [2% of its Annual Energy Production \(AEP\)](#). It can also preserve the lifetime of the turbine by reducing the wear imposed by such a high rotor imbalance.



ERG & Sereema have now entered in a 3-year framework agreement to diagnose their assets all over Europe.

Davide Prato, Mechanical Engineer and CMS specialist at ERG Italy says:

“Sereema’s Windfit is a very useful product that allows ERG to discover any kind of problem related to the rotor area (blade and pitch system) and to diagnose aerodynamic or mass imbalances. In addition, it is very helpful to detect north deviations or yaw misalignments in order to improve the WTG performance

About Sereema :

Sereema is a Green Tech company aiming towards wind turbine operation and maintenance excellence. Windfit®, is its autonomous, all-inclusive digital solution to correct under-performing wind turbines and preserve lifetime while offering independent real-time monitoring on a user-friendly web portal. Thanks to its Windfit-connected technology, Sereema provides peak services to optimize energy production and maintenance of wind farms. Sereema now supports over 1.6 GW of wind farms across the world. For more information : www.sereema.com