



Success Story

MONITORING WIND TURBINES AT EDPR IN USA

Leading North American wind turbine operator chooses Brüel & Kjær Vibro

EDP Renewables North America (EDPR NA) has selected Brüel & Kjær Vibro to supply and retrofit the installation of condition monitoring systems and monitoring services for seven US wind farms. Initially, Brüel & Kjær Vibro will perform all monitoring, diagnostic and reporting functions, however, the VibroSuite software will be installed on EDPR NA servers to enable their diagnostic team to simultaneously leverage the diagnostics done by Brüel & Kjær Vibro and learn to use the system. Eventually EDPR will assume all surveillance activities, using VibroSuite as the monitoring platform.

MACHINE/INDUSTRY/PROCESS

Machine	391 GE and Suzlon wind turbines: Entire drive train and tower to be monitored
Company/Process	EDPR NA, headquartered in Houston, Texas, is a subsidiary of the European based EDP Renováveis (EDPR) and the parent company Energias de Portugal (EDP). EDPR is the world's third largest producer of wind energy with an installed capacity of 8.5 GW (5000+ wind turbines).
Monitoring System	Brüel & Kjær Vibro Wind Turbine Monitoring System and the global Surveillance and Diagnostics Service Centres. VibroSuite will also be provided.
Monitoring Strategy	Frame agreement for the seven wind farms for around-the-clock fault monitoring, fault diagnostics, root-cause analysis, alarming and maintenance recommendations

BENEFITS

As a major supplier of wind energy, the reliability and efficiency of the wind farms is very important to the owner/operator. Brüel & Kjær Vibro provides a monitoring solution that minimizes the life cycle costs of operating and maintaining the wind turbines. EDPR NA has full control over the monitoring data. Brüel & Kjær Vibro provides a wide range of services including diagnostic support to the gain experience in doing their own diagnostics. There is only one system for evaluating their fleet, but there is the possibility for third party data acquisition systems to be accessed by VibroSuite.



Figure 1. One of the accelerometers on the main bearing of a wind turbine at the Lone Star wind farm in Texas, USA.

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