

Bonn, 27 September 2016

Generating wind power in forested regions

Met mast detects wind conditions at a height of up to 200 metres

In Germany, nearly half of the sites particularly suitable for wind turbines are found in forested low mountain ranges. This is especially true for the southern half of the country. Expanding wind power in these regions has the advantage that the wind power will be generated close to urban areas and industrial centres. The BINE Projektinfo brochure entitled "Measuring wind potential in low mountain ranges" (12/2016) presents the long-term measurements made on a 200-metre-high met mast near Kassel. The results are helping to improve meteorological models, tailor the design of wind turbine components and further develop the laser-based LiDAR method.

Since 2012, the met mast on Rödeser Berg has measured wind speeds, turbulence and icing as well as the impact of forested areas and landscape forms on each air layer up to 200 metres in height. This long-term data improves the wind field modelling of forested low mountain locations and reduces previous uncertainties in the assessment of new sites. The met mast is also being used to make comparisons with the cheaper, laser-based LiDAR method. This will make it possible to mathematically correct the location-dependent errors that occur when measuring with lasers. In addition, the data from the mast has been incorporated together with the measurement results from other locations into a new wind atlas. This provides verified data with a 3-kilometre horizontal resolution.

The Fraunhofer Institute for Wind Energy and Energy System Technology was in charge of the research at the met mast and the LiDAR comparative measurements. anemos Gesellschaft für Umweltmeteorologie mbH developed the wind atlas.

The BINE Projektinfo brochure, which can be obtained free of charge from the BINE Information Service at FIZ Karlsruhe, is available online at www.bine.info or by calling +49 (0)228 92379-0. The brochure cover and an additional image can also be downloaded from the press section in this web portal.

Contact
Uwe Milles
presse@bine.info

BINE information service
Kaiserstraße 185-197
53113 Bonn
www.bine.info