

Energy Assessment

Prototyping & Testing

Grid Integration & Power Quality

Test Sites

Prototyping & Testing

# POWER PERFORMANCE



Efficiency and power output – these are the benchmarks of wind turbine value. Precision in measuring them – this is the value of windtest grevenbroich.

*We independently design and execute in-depth measurement plans that pinpoint the operational quality of turbines. Our evaluations of small wind turbines, utility-scale wind turbines and manufacturers' prototypes are the basis for minimizing costs, complying with regulations, meeting contractual obligations and maximizing profitability.*

We are a global expert in power performance evaluation, so you also get decades of industry experience behind your turbine evaluations, measurements and validations.

Powerful performance. By any measure, you'll be prepared with windtest grevenbroich.



## WHY WINDTEST GREVENBROICH?

The reports we deliver to **wind farm developers, investors and lenders** provide valuable power curve data that allows you to calculate and project annual energy yield and cost-effectiveness with exceptional accuracy.

As an **operator or owner**, you'll get exactly what you need to determine whether your turbines are measuring up to manufacturers' guarantees.

We also test prototypes for **OEMs** so you can enhance designs and confidently assure customers their turbines will perform to contractual specifications.

www.windtest-nrw.de



quality by any measure

## A PROVEN PROCESS

We work closely with you through every phase of power performance evaluation.

### Site Inspections

Turbine prototype evaluation requires a thorough site inspection to determine weather conditions, terrain and geographic or man-made features that might interfere with wind flow and, therefore, measurement accuracy.

### Site Calibrations

If there are obstacles to wind flow such as hills, tall buildings or other wind turbines nearby, a site calibration will be necessary. We'll develop a measurement plan, erect wind measuring masts, and install the most advanced sensors and technologies available, in some cases including SoDAR or LiDAR remote sensing systems. We measure air density, distance between obstacles and turbines, temperature, wind direction and wind speed and so on to establish a valid measurement sector. During our analysis, we identify any corrections needed to offset deviations.

### Ongoing Assessments

Once the turbine or wind farm is operating, windtest grevenbroich conducts periodic power performance assessments to ensure turbines are generating the correct amount of power as efficiently as possible.

For site calibrations and ongoing assessments, you get everything from a single source. We install the wind measuring mast, sensors and the performance measurement system, monitor the measurement process and evaluate data. We provide monthly reports throughout the testing period, which generally lasts from three to six months, and present overall results in a detailed final report.



## EXPERIENCED AND HIGHLY QUALIFIED

- More than 20 years of service to clients
- Engineers with more than 160 years of combined experience
- Active in North America for nearly a decade
- Full member of MEASNET, the international leader in wind energy measurement standards, since 2000
- President/CEO chairs MEASNET Board of Directors United States.
- Accredited according to DIN EN ISO/IEC 17025:2005 by DAkkS, the German national accreditation body
- FGW and MEASNET seals of conformity for measuring wind turbine power performance

## YOUR CONTACT

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