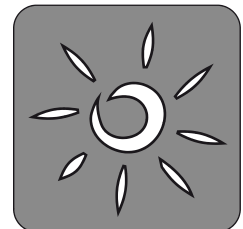
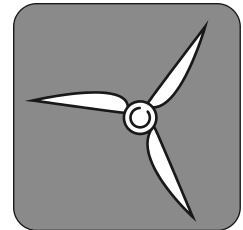


Technical Guidelines

for Wind Turbines

PART 2 (TG 2)
Determination of Power Curves and
Standardised Energy Yields

Revision 18
Dated 22/12/2022



Published by
FGW e.V.
Fördergesellschaft Windenergie
und andere Dezentrale Energien

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In the interest of easier legibility, a gender-neutral differentiation is not used here. Any gender-specific terminology always refers to any gender.

The following Parts of FGW Technical Guidelines are available:

- Part 1:** Determination of Noise Emission Values
- Part 2:** Determination of Power Curves and Standardised Energy Yields
- Part 3:** Determination of the Electrical Characteristics of Power Generating Units and Systems, Storage Systems as well as for their Components in Medium, High and Extra-High Voltage Grids
- Part 4:** Demands on Modelling and Validating Simulation Models of the Electrical Characteristics of Power Generating Units and Systems, Storage Systems as well as their Components
- Part 5:** Determination and Application of Reference Yield
- Part 6:** Determination of Wind Potential and Energy Yield
- Part 7:** Operation and Maintenance of Power Plants for Renewable Energy
 - Category A:** Miscellaneous section
 - Category A1:** Plant responsibility
 - Category B3:** Specialist application notes for monitoring and testing foundations and supporting structures for wind turbines
 - Category D2:** State-Event-Cause code for Power Generating Units (Zustands-Ereignis-Ursachen-Schlüssel; ZEUS)
 - Category D3:** Global Service Protocol (GSP)
 - Category D3 – Attachment A:** XML-Schema documentation
- Part 8:** Certification of the Electrical Characteristics of Power Generating Units, Systems and Storage Systems as well as their Components on the Grid
- Part 9:** Determination of High Frequency Emissions from Renewable Power Generating Units
- Part 10:** Determination of Site Quality after Commissioning

Foreword

The development of these Technical Guidelines for Wind Turbines (also known, since 1998, as FGW Guidelines) began in 1992 with the objective of presenting measuring methods allowing the determination of reliable and comparable data for wind turbines (WTs) based on state-of-the-art technology. The measurements from the three fields - power curve, noise emissions and electrical properties - should serve as the foundation for the assessment of WTs, e.g. in permit issues, when assessing grid connection options or for reliable yield calculations.

In the meantime, the individual Technical Guidelines and the test reports compiled by independent measuring institutes are widely recognised in their fields. Power curves form the basis for purchase agreements and finance commitments, measured noise emission values are adopted both for sales contracts and are used in the course of approval procedures.

Measurements and their recognition

Measurements in accordance with the Technical Guidelines can be carried out by all qualified measuring institutes. A test report covering the measurements must be compiled; the principal results can be summarised in a test report excerpt applying the specifications provided in this Guideline (FGW master data sheet).

However it should be noted that over and above the specifications described in these Technical Guidelines, the agency requested to recognise the measurements may place further demands on the measuring institute. WT measurement certifiers, for example, require a measuring institute to be accredited in accordance with DIN EN ISO/IEC 17025.

FGW conformity

Independent measuring institutes can emphasise the quality of their work by the use of a conformity seal. The seal is applied at the bottom of the test report (or excerpt from the test report). After supplying a proof of certain quality characteristics, independent measuring institutes can apply for an entitlement to use the conformity seal. These quality characteristics are published on the FGW website.

Validity

With publishing the current revision of this Guideline all previous revisions of TG 2 are withdrawn.

This Guideline is an English translation of a prior German version. In any case of distinction between both revisions of TR 2 the German version is valid.

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