

Different markets, different rules – one goal

Tailored Certification Solutions



WINDGUARD
Certification

SINGLE-SOURCE CERTIFICATION SERVICES

Objective results of exceptional quality

WindGuard Certification is your reliable partner for all certification tasks in the field of wind and other renewable energies. Benefit from our extensive experience, interdisciplinary expertise and our engineers' in-depth industry knowledge. Entrust us with your individual project.

THE RIGHT SERVICE FOR YOUR INDIVIDUAL TASK

WindGuard Certification is an independent DIN EN ISO/IEC 17065 accredited certification body and additionally operates an accredited test laboratory in accordance with DIN EN ISO/IEC 17025.

Our comprehensive portfolio of testing and certification services includes:

- Certification of electrical characteristics
- Certification of power generating units (PGU), components and power generating plants (PGP)
- Type certification according to DIBt, EN/ISO 61400-22 and OD-501
- Project certification according to BSH, EN/ISO 61400-22 and OD-502
- Site specific design assessment (SSDA)
- Certification for lifetime extension
- Testing of grid characteristics including Fault-Ride-Through (FRT)
- Test equipment manufacturing
- Additional services and testing

INTERNATIONALLY ACCEPTED ACCREDITATION

We are accredited by the German Accreditation Body (Deutsche Akkreditierungsstelle – DAkkS) for high-quality technical services. This offers you the security of objective, internationally accepted results.

WindGuard Certification is a member of IECRE and contributes expert knowledge to numerous committees involved in the development of certification and testing standards.

Additionally, WindGuard Certification is recognised by the Federal Maritime and Hydrographic Agency (Bundesamt für Seeschifffahrt und Hydrographie – BSH) as a certification body for offshore projects.

LONG-STANDING EXPERIENCE AND PROFOUND EXPERTISE

WindGuard Certification's success story began with its foundation in 2011. Today, our 25 employees collectively contribute more than 100 years of experience in the field of renewable energies and more than 50 years of certification expertise.

With our many years of industry insight and sound specialist knowledge of all relevant standards, we deliver globally recognised services with exceptional quality.

Also benefit from synergies within the WindGuard Group, granting us access to expertise from a wide range of disciplines – including consulting, due diligence, site analysis, surveying and many more.



ELECTRICAL CERTIFICATION

As a manufacturer of power generating units (PGU) or as a project planner or operator of a power generating plant (PGP) of any technology, you are obliged to prove the grid compatibility and integration of your product or plant through certification.

Accredited by the German Accreditation Body (DAkkS), WindGuard Certification is your experienced partner for unit and plant certification.

We are at your side during the whole process. From testing and measuring to proving electrical properties in accordance with the applicable guidelines, we will accompany you all the way to the successful operation of your system.

UNIT AND COMPONENT CERTIFICATION

In order to obtain approval for connection to the public grid, power generating units such as wind turbines, inverters for solar energy, combined heat and power plants as well as energy storage units require a unit certificate.

It proves on a type-specific basis that the power generating unit is suitable for its intended operation in the low, medium or high voltage grid and complies with the corresponding grid connection guidelines.

Since certain equipment such as protective devices and controllers can also significantly influence the required electrical properties, their suitability must be verified by component certificates.

Unit and component certification are prerequisites for obtaining the system certificate for the operation of the generation system.

WE ASSIST YOU THROUGHOUT THE ENTIRE PROCESS

WindGuard Certification accompanies you through the entire certification process: from reviewing the manufacturer's documentation and the verification of the electrical characteristics by means of suitable tests and measurements in our own test laboratory to issuing the certificate and the detailed evaluation report.

CERTIFICATION OF POWER GENERATING PLANTS

Operators of power generating plants (PGP) with a total output of 135 kW or more must submit a plant certificate before or at the time of commissioning of the plant.

In the course of plant certification, we consider the PGP, for example the wind or photovoltaic farm or the combined heat and power plant, as a whole entity as early as the planning phase.

PGP certification aims to prove that the plant, with its entire electrical infrastructure for connection to the grid, complies with the guidelines and that safe grid operation is guaranteed. The plant certificate is a prerequisite for commissioning the plant.

Our experienced team will be pleased to accompany you through to the regular operation of your system. In the WindGuard group, we can prepare the required commissioning declaration, and finally we will check whether the finished system complies with the planning and issue you with the corresponding declaration of conformity. This document is a prerequisite for permanent operation and confirms that your project has been implemented in compliance with the applicable guidelines.



LIFETIME EXTENSION CERTIFICATION

Fully exploit the economic potential of your wind turbine or wind farm and go for continued operation after the design lifetime has expired.

As a pioneer in the field of lifetime extension, WindGuard Certification introduced the lifetime extension certificate back in 2014 and became the world's first to offer this service with accreditation by the German Accreditation Body (DAkkS).

With our many years of experience, we offer you customised solutions for all turbine types on the market, depending on the utilisation horizon and continued operation concept required. Our assessments are recognised by the relevant licencing authorities.

ANALYTICAL AND PRACTICAL ASSESSMENT

The prerequisite for lifetime extension is the proof that your wind turbine can continue to be operated safely in the future. This is important as the type certificate only proves the structural integrity of your turbine for the design service life of typically 20 years.

In an analytical and a practical assessment, we verify whether your turbine continues to comply with all applicable directives even after design life expiry.

All analytical calculations are based on aeroelastic simulation using adapted generic turbine models. In addition to actual operating data from the turbine, we also take into account the farm configuration, additions and removals in the past, or components that have already been replaced. This helps us to determine how the actual site conditions have influenced the service life compared to the assumptions in the type certificate.

The practical inspection not only covers the scope of the recurring inspection, but also includes the analysis of previously identified weak spots. Optionally, we also offer you transmission endoscopy, oil analysis, condition monitoring and other additional services as required. This way, we give you certainty about the technical condition of your turbine.

PLAN AHEAD FOR THE FUTURE OF YOUR TURBINE

Whether you continue to operate your wind turbine or possibly dismantle and sell it depends upon a number of factors.

If you would like a sound basis for decision-making at an early stage, with WindGuard Certification you can bring forward the analytical part of the lifetime extension assessment by two to three years.

Our experts' opinions provide you with planning security for the future.



TYPE CERTIFICATION

Type certification attests that your wind turbine or its components comply with all applicable directives and standards. This includes the examination of the design documentation and the evaluation of the manufacturing and the prototype test.

In addition, we check the design of the complete wind turbine including load assumptions, safety concept and all components such as the tower, rotor blades, machinery and electrical components.

With WindGuard Certification, you have a reliable partner at your side for the whole type certification process, onshore or offshore. Our experienced specialists are at your disposal for all questions regarding the type certification assessment.

PRAGMATIC ASSESSMENT AND SUPPORT AT ALL STAGES

Thanks to many years of experience, our project managers and engineers stand for a speedy and pragmatic assessment approach and will accompany you throughout the whole process of type certification.

We focus on coordinated and structured communication at all stages to provide you with optimal support, ensuring that certification will not impact the critical path of your project timeline.

WindGuard Certification is accredited by the German Accreditation Body (DAkkS) for the type certification of wind turbines and components according to the international schemes IECRE OD-501, DNVGL-SE-0074 and DNVGL-SE-0441 as well as the German DIBt 2012 - Type Approval.

Our DIN EN ISO/IEC 17025 accredited test laboratory offers you the type measurements required for your type certification.

CHARACTERISTICS OF TYPE APPROVAL IN GERMANY

A prerequisite for the approval of a wind turbine type under construction law in Germany is the Type Approval (Typenprüfung) in accordance with the guideline from the German Institute for Construction Technology (DIBt).

This primarily involves assessing the stability of the wind turbine tower and foundation over the design lifetime. Type approval can be carried out by a testing office (Prüfamt) recognised by the DIBt. As a rule, a valid type certificate must be presented.

To ensure the type approval of your wind turbine goes smoothly, the WindGuard Certification team of experts is happy to provide you with advice and support.



PROJECT CERTIFICATION

For your wind energy project, safety, reliability and profitability are your priorities at every stage – from planning to construction and operation through to decommissioning. Project certification ensures compliance with guidelines and requirements for the specific site, but also helps you minimise potential risks.

Whether on land or at sea, project certification always begins with an assessment of the individual site conditions. The inspection of the design basis and support structure are part of the certification process, just as the evaluation of the various wind turbine components and other installations. This includes monitoring of the manufacturing, transport, installation and commissioning.

OFFSHORE EXPERTISE AT ALL STAGES OF YOUR PROJECT

The WindGuard Group has been supporting offshore project developments and the German Federal Maritime and Hydrographic Agency (BSH) since 2010.

Today, WindGuard Certification is a recognised certification body for all trades and project phases in the German maritime zone in accordance with BSH Standard Design 7005.

We will accompany you throughout the whole process of project certification. Thanks to many years of experience, our project managers and engineers stand for a speedy and pragmatic assessment approach.

WindGuard Certification is accredited to certify international offshore projects according to EN/ISO 61400-22, BSH Standard Design (No. 7005), DNVGL-SE-0190, DNVGL-SE-0073 and IECRE OD-502.

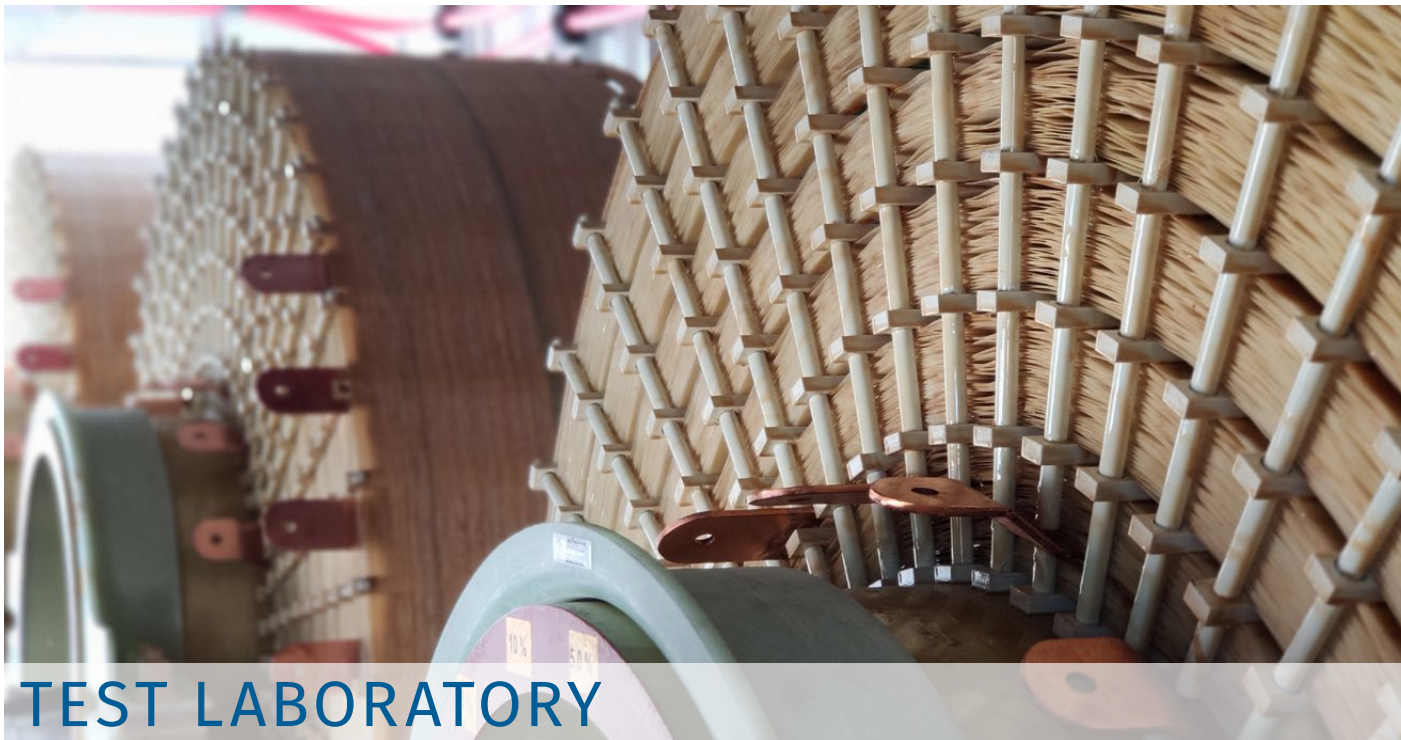
Experienced, internationally recognised experts from WindGuard Consulting and WindGuard Offshore are on hand to support the project certification – particularly with challenges that arise in the study and planning phase, subsoil assessment and integrated load analysis.

CERTIFICATION FOR YOUR ONSHORE PROJECT

Requests for an adapted project certificate from an independent certification body are becoming increasingly common for onshore projects.

This adapted project certificate will confirm that the design is in line with the necessary requirements.

WindGuard Certification has extensive experience as a certifier for site-specific design assessment and site suitability according to EN/ISO 61400-22 and IECRE OD-502, for example, examining the suitability of a specific wind turbine for the conditions of a specific site.



TEST LABORATORY

Power quality and control characteristics of power plants, energy farms, individual components and prototypes need to be tested before their connection to the public grid. This applies to wind and solar energy, combustion engines or energy storage systems.

WindGuard Certification operates its own test laboratory accredited by the German Accreditation Body (DAKKS) in accordance with the current DIN EN ISO/IEC 17025 standard for all applicable guidelines.

For the certification and safe operation of your generating unit (PGU), generating plant (PGP) and component, we offer all necessary measurements of the electrical properties from one single source.

MEASUREMENTS FOR UNIT CERTIFICATION

The unit certificate confirms, on a type-specific basis, that the generating unit is suitable for the intended operation on the low, medium or high voltage grid and that it complies with the corresponding grid connection guidelines. We offer the full range of measurements of the grid and control characteristics required for unit certification.

With our mobile test facility, we can even perform the entire dynamic grid support testing directly at your site or at the location of your prototype. The Fault-Ride-Through (FRT) test system simulates fault conditions in the public grid and shows whether your generating unit reacts according to the requirements and returns to normal operation after registering a fault, without disconnecting from the grid.

INSPECTION WITHIN THE SCOPE OF COMMISSIONING

Before your generating plant is allowed to enter operation, you will need a commissioning declaration. Our test laboratory carries out the required test on your behalf. This includes the careful inspection of all documents, test protocols and verifications required for commissioning. In the course of an on-site inspection, we also verify that the plant has been erected exactly in accordance with the plant certificate. We then certify this by issuing the commissioning declaration.

MEASUREMENTS FOR SAFE OPERATION

Exceeding limit values in the grid can incur high costs due to damage to the generating plant or to the public grid. For safe operation, operators of generating plants must prove compliance with all specifications relevant to safety and grid stability at regular intervals.

Our test laboratory offers protection tests according to the grid operator's specifications or, on request, according to the FGW TR 3 test specification. Thanks to many years of experience and active participation in the design of the applicable guidelines, our experts know exactly what needs to be tested and to what extent, so that you can operate your system safely and without risk.

TEST EQUIPMENT MANUFACTURING

Based on our many years of experience in measuring electrical properties, we also offer the construction of test equipment for individual applications in the low and medium voltage grid. Our convenient one-container FRT testing solutions are suitable for manufacturers of generating units such as wind turbines, photovoltaic systems, storage tanks and combustion engines, who want to carry out extensive testing during product development. We offer versions according to various international requirements that convince customers worldwide.



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