

## Tailwind for Your Project. Right from the Start. TÜV Rheinland Wind Energy Services.

Wind energy projects present various challenges. Complex site conditions, the development of more efficient turbines and their integration into the power grid bring major demands to all stakeholders, including regulatory authorities, manufacturers, suppliers, project developers and operators.

To ensure the success of your project, TÜV Rheinland provides you with comprehensive, individual and independent support, whether for the development of a wind turbine or a complete wind farm. We cover all phases of the project. From site evaluation and energy yield assessment, to design verification, surveillance of manufacturing and construction through to commissioning and periodic inspections.

What makes the difference: TÜV Rheinland wind experts contribute to your project success by using their extensive, industry-specific experience and help to develop and implement technological advancement. All technical aspects and demands for operating wind power are addressed within our multidisciplinary team. Flexibility and interregional cooperation on a global level characterize our organization for the wind sector.

Our actions are determined by economic considerations in conjunction with the protection of people and the environment. TÜV Rheinland technical expertise is widely recognized by investors, banks, developers, manufacturers and operators. Benefit from our comprehensive services and the strength of our global network!

### TÜV Rheinland Accredited Services for the Wind Industry

TÜV Rheinland is accredited by the German Accreditation Body (DAkkS) for the following operations:

- ISO/IEC 17065 Certification Body for type and component certification of onshore and offshore wind turbines in accordance with international standard IEC 61400-22, GL guideline and various national standards like DIBt guideline
- Grid integration (unit/component certification and power plant certification)
- ISO/IEC 17020 Inspection Body for wind turbines and components
- ISO/IEC 17025 Test Laboratory for determination of wind potential, energy yield, turbulence characteristics, shadow flicker, noise pollution, visibility and radar



Deutsche  
Akkreditierungsstelle  
D-ZE-11052-02-00

Always a good sign. The TÜV Rheinland test mark.



This mark stands for all the relevant customer information about products, services and systems that are tested, certified or inspected by TÜV Rheinland. This information is available online anytime, anywhere, and can be viewed in a matter of seconds at the click of a button. This means optimal transparency and top performance in terms of safety, quality and reliability – always. Global, systematic and eye-catching – communicated through a unique and multifunctional mark. The TÜV Rheinland test mark.



TÜV Rheinland  
Industrie Service GmbH  
Wind Energy  
Julius-Vosseler-Str. 42  
D-22527 Hamburg  
Germany  
Phone +49 40 3787904-900  
wind@de.tuv.com  
www.tuv.com/wind

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## 360° Support in all Matters. For Sustainable Investments.

Comprehensive Services for Wind Energy.

[www.tuv.com/wind](http://www.tuv.com/wind)







No matter how complex your project is – at TÜV Rheinland you find a qualified expert every time.

## In-depth wind energy experience. Turning visions into reality.

Services worldwide covering all project phases:

- 1 Product Certification** – Our certification services cover type and component certification for wind turbines and are based on the international standard IEC 61400 as well as applicable national guidelines and standards (e.g. DIBt Guideline)
- 2 Project Certification** – Commencing with document reviews and calculations in the development and design phases, we supervise and monitor manufacturing, transport and installation, and continue through to construction and operation.
- 3 Management System Certification** – We evaluate and certify management systems, IT processes and complete businesses in accordance with internationally recognized standards, or on the basis of individual performance criteria.

- 4 Project Planning Services** – We provide you with preliminary assessment services in the project planning phase and support you in the licensing phase with obtaining official consent both for onshore and offshore projects.
- 5 Manufacturing Surveillance** – TÜV Rheinland possesses extensive experience in manufacturing surveillance of steel, concrete and composite structures, foundations and components. At the factory we act as independent eyes and ears, avoiding potential delays, losses and damages.
- 6 Coating Inspection Services** - In order to ensure best quality and durability, we offer extensive testing and evaluation services for coating systems. As a result, intervals between maintenance can be maximized.
- 7 Periodic Inspections** – Our inspections ensure reliable operation and maximize the productivity and profits of your wind project by minimizing unscheduled downtimes. The scope comprises statutory and non-statutory inspections, full-scope turbine and blade inspections. The services are applicable both onshore and offshore.

- 8 Due Diligence** – To make sure wind energy projects perform successfully and deliver the desired revenue throughout their intended lifetime, TÜV Rheinland offers you an individual due diligence service package.
- 9 Grid Connection** – TÜV Rheinland provides a full range of services for the integration of dispersed power generation units into the power grid. Our services include the verification and testing of grid code compliance and consulting services.
- 10 Condition Monitoring** – Our in-house developed CMS and our Monitoring Body (both certified acc. to GL2013) enable reliable monitoring of sensitive components to your needs and provide you with a continuous system support. This helps to detect damage and performance losses at an early stage.
- 11 Risk & Safety Management** – Risktec Solutions, our global centre of competence for Risk and Safety Management, helps you manage risk effectively throughout the entire life-cycle of your Wind Energy project or related activities.