

# Project Certification for Offshore Wind Farms.



To ensure the success of your wind farm project, we provide a range of services to support you at every phase of the project life cycle – from site selection, design and manufacturing, right through to operation.

<b>Product Certification</b>	<b>Project Certification</b>	<b>Manufacturing Surveillance</b>
<b>Health &amp; Safety</b>	<b>Marine Warranty Survey</b>	<b>Periodic Inspections</b>
<b>Due Diligence</b>	<b>Laboratory Services</b>	<b>Expert Reports</b>
<b>Training / Education</b>	<b>Management System Certification</b>	<b>Grid Connection</b>
<b>Project Planning Services</b>	<b>Coating Inspection Services</b>	<b>CE Marking</b>

## Independent project certification services for offshore wind farm projects

Due to harsh environmental conditions and far distances from shore, offshore wind farms incur many risks and challenges. In order to safeguard the quality and productivity of your offshore wind farm projects, protect your investments and minimize your risks, an independent certification and inspection body, such as TÜV Rheinland, is necessary.

We offer a comprehensive range of services for project certification of offshore wind projects – from the development and design phase, through to construction and operation.

Our diverse range of services is available all over the world. We are your local contact with the international background and expertise you need, understanding both the local and worldwide challenges you face in your industry.

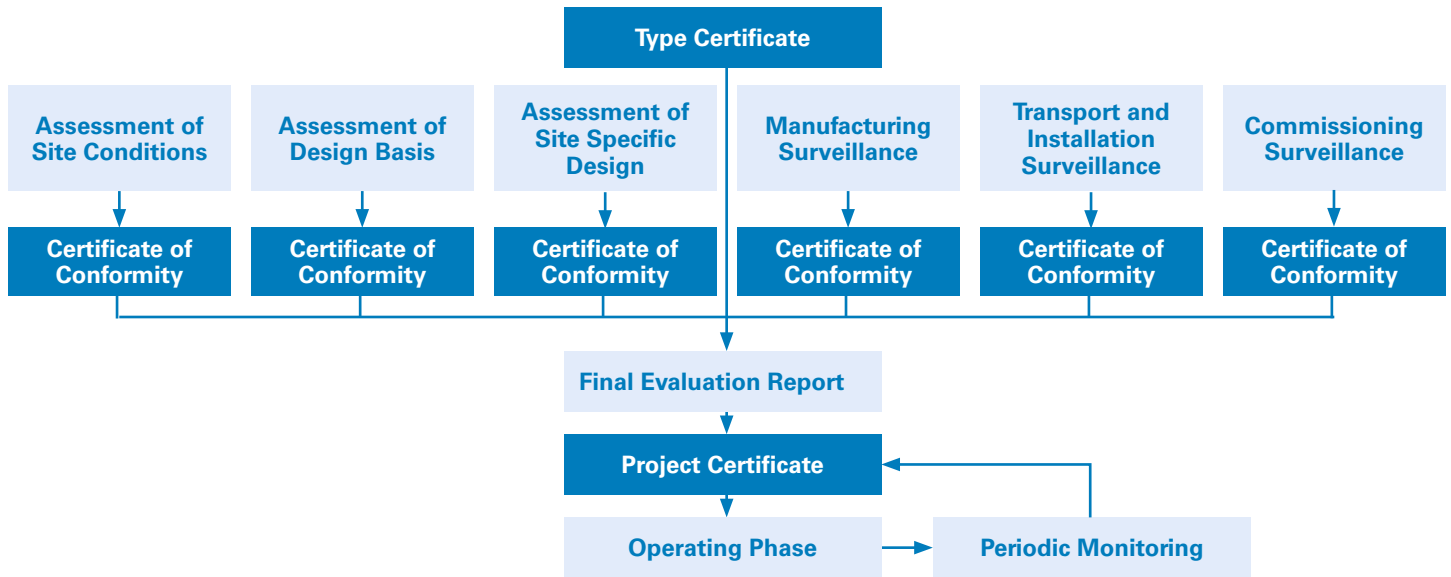
### Our experience – your benefit

In order to ensure approval for your offshore wind farm project in the German Exclusive Economic Zone (EEZ) of the North and Baltic Seas, your project will need to meet the standards set by the Federal Maritime and Hydrographic Agency (BSH, or Bundesamt für Seeschifffahrt und Hydrographie).

TÜV Rheinland is authorized certifier by the BSH. Our project certification services will ensure that your offshore wind farm project will successfully complete all phases and achieve the final operations release by the BSH.

For international projects we offer project certification in accordance with the IEC 61400 standard series.

Our project certification services for offshore wind farms are divided into seven modules:



**1. Assessment of site conditions:**

The conditions at the concession area, such as environmental wind and waves and soil conditions will be assessed and certified, so that the results can be used as part of the design basis.

**2. Assessment of the design basis:**

The design basis, including parameters and requirements for the design, will be examined to ensure that it is properly documented and sufficient for the safe design and execution of the project.

**3. Assessment of site-specific design:**

The basic design of all parts of the wind farm, from the foundation and the nacelle unit up to the substation, will be evaluated with respect to the site conditions. This includes the assessment of the load assumptions and the factors that affect each part of the wind turbine. It ensures that the wind farm is fit for purpose and will provide the required lifetime within the tolerance limits of the design.

**4. Manufacturing surveillance:**

The surveillance of the production verifies that manufacturing is performed according to the approved rules, specifications and drawings.

**5. Transport and installation surveillance:**

We provide approval of specifications and procedures from load out to erecting and on-site monitoring.

**6. Commissioning surveillance:**

We monitor testing of the safety and control systems of the wind turbine to ensure safe operation. All components will be checked for damage and conformity with the certification documents.

**7. Periodic monitoring:**


We perform examination of operation and maintenance records. We also inspect all parts, systems and components covered by the project certificate on a regular basis for functionality, corrosion, damage and wear.

After successful completion of modules 1 – 6, we issue a project certificate, which is valid for the lifetime of the project, as long as periodic monitoring is carried out according to the agreed standards.

Founded 140 years ago, TÜV Rheinland is a global leader in independent inspection and certification services, ensuring quality and safety for people, the environment, and technology in nearly all aspects of life.

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

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