

Deutsche WindGuard Offshore

CONSULTING AND OFFSHORE SAFETY TRAINING





Offshore-Consulting

DEVELOPMENT · CONSTRUCTION · EXECUTION · OPERATION · DECONSTRUCTION

Since September 2010, Deutsche WindGuard Offshore has pooled the expertise within the WindGuard Group for the offshore wind industry. Alongside certified offshore safety trainings, which have been offered by WindGuard for several years, the experts of Deutsche WindGuard Offshore offer their know-how in all areas of offshore consulting – from due diligence, design basis and operation management to maintenance concepts. We provide you with process analysis and risk assessments as well as technical studies for foundation structures and the installation of offshore wind turbines.

In all core areas of offshore wind farm development – from licence planning to construction and execution planning as well as during the operational phase – we offer high-level engineering services and assume the management of sub-projects when needed. With our experts at your side your offshore project will be well managed – throughout the entire project life cycle.



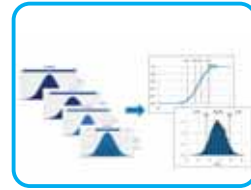
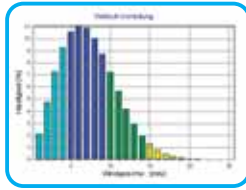
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PROJECT LIFE CYCLE OF AN OFFSHORE WIND FARM

Services offered by Deutsche WindGuard

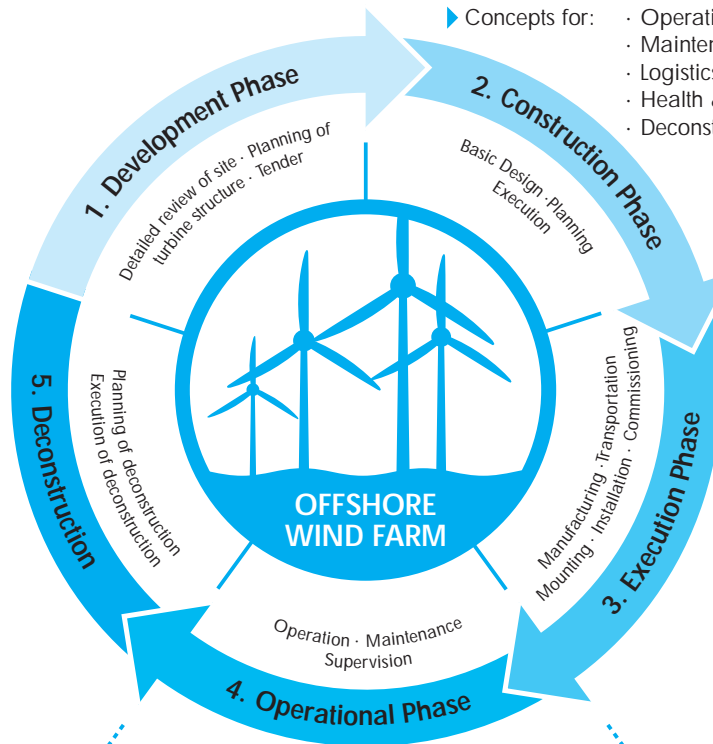


DEVELOPMENT: To determine the design basis and creating the basic design are the first steps in every offshore project. We take on the following additional steps for you:

- ▶ Feasibility studies
- ▶ Expert opinions on:
 - Site assessment
 - Wind resource
 - Met masts
 - LIDAR
- ▶ Design Basis

CONSTRUCTION: During construction detailed verifications, construction plans and specifications for supporting structures, transformer stations and grid connection, meteorological masts, and additional components of the offshore wind farm are required. Our services include:

- ▶ Concepts for:
 - Operation
 - Maintenance
 - Logistics
 - Health & safety
 - Deconstruction
- ▶ Technical design
- ▶ Technical construction
- ▶ Technical due diligence
- ▶ Risk management
- ▶ Risk analysis

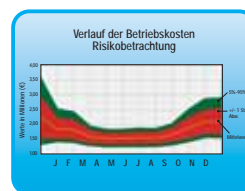


DECONSTRUCTION: Prior to the expiration of the operating licence, we update your concept for deconstruction and adjust it to the state-of-the-art. We organise:

- ▶ Deconstruction concept
- ▶ Logistics

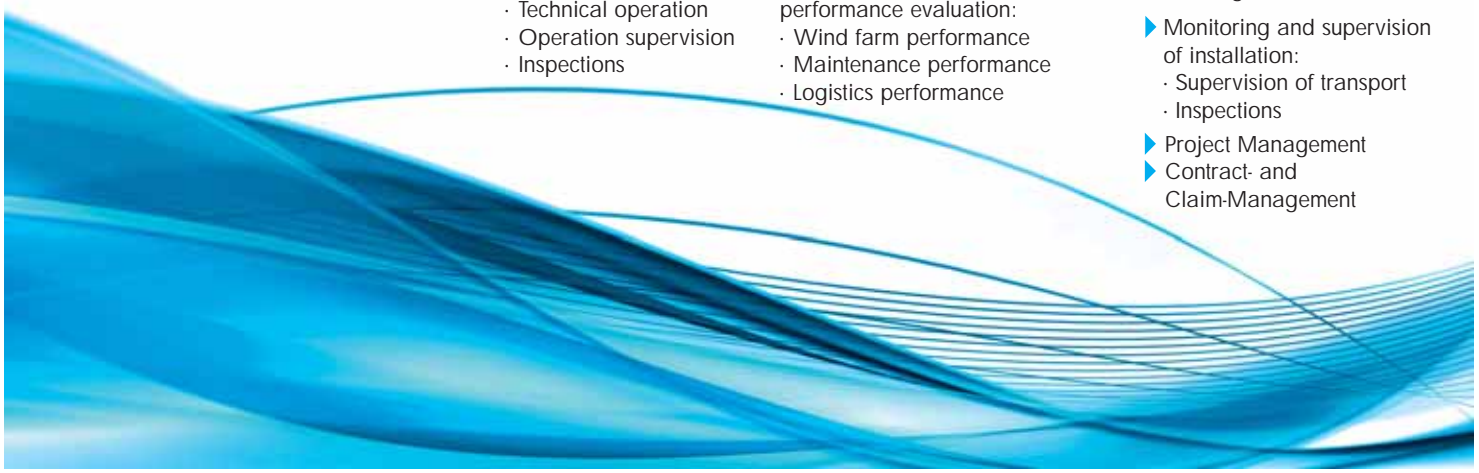
EXECUTION: During execution all components for the offshore wind farm are produced, transported and assembled and the wind turbines are erected. Finally, the application for the operating licence is filed. We offer monitoring and supervision of all steps during assembly and installation:

- ▶ Monitoring of manufacturing and assembly:
 - Supervision
 - Quality assurance
 - Support of manufacturing management
- ▶ Monitoring and supervision of installation:
 - Supervision of transport
 - Inspections
- ▶ Project Management
- ▶ Contract- and Claim-Management



OPERATION: Operation consists of operation management and maintenance. We support you, in order that you retain your operating licence.

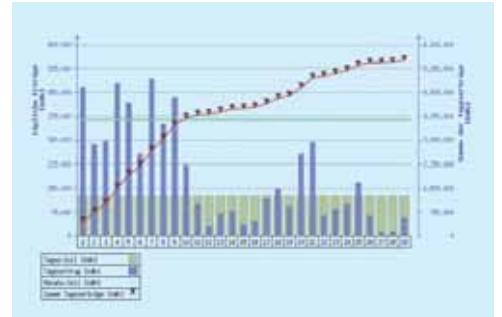
- ▶ Operation management:
 - Technical operation
 - Operation supervision
 - Inspections
- ▶ Supervision and performance evaluation:
 - Wind farm performance
 - Maintenance performance
 - Logistics performance





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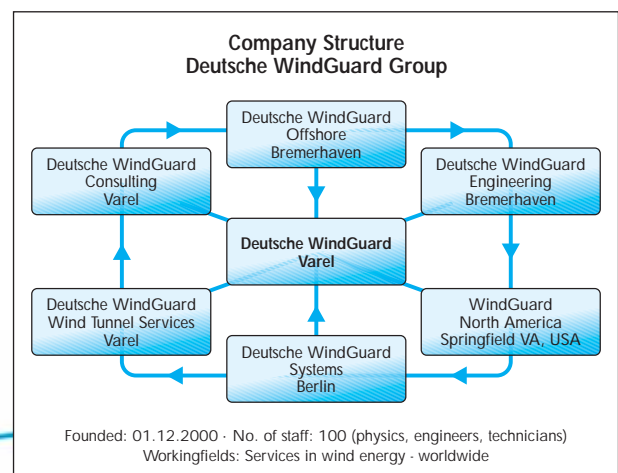
THE WIND PROFESSIONALS



Deutsche WindGuard is one of the leading consulting companies in the German wind energy industry. With its headquarter in Varel and offices in Bremerhaven, Berlin, and Springfield (Virginia, USA), Deutsche WindGuard is a dynamically growing and internationally operating company with more than 100 employees offering services in all areas of wind energy. Based on their long-standing national and international experience, many of our employees are continuously involved in numerous research projects.

Due to the broad range of business activities of the Deutsche WindGuard Group, we have direct insight in all areas of wind energy. Our services include policy consulting, technical management of wind farms, verification and optimisation of wind turbines, project management and monitoring, post-project turbine measurement (power curve measurements and vibration analysis), anemometer and wind vane cali-

bration, and wind turbine inspection. Additionally, we offer project and financial assessment (i. e. risk analysis, due diligence or banks engineering).





Offshore Safety Training

BOSIET AND HUET TRAINING COURSES

Better safe than sorry!

All offshore work is subject to strict safety requirements. All personnel wishing to access wind turbines offshore need to be qualified accordingly. Deutsche WindGuard offers tailor-made safety courses near Bremen in one of Germany's most advanced maritime safety training centers.

HUET

Helicopter Underwater Escape Training

This one-day-course trains delegates how to behave during helicopter transfers, concentrating on rescue routines using an emergency breathing system.

Learning targets:

- ▶ Rescue from a buoyant helicopter
- ▶ Rescue from a sunken helicopter
- ▶ Rescue from a helicopter after a rollover

BOSIET

Basic Offshore Safety Induction and Emergency Training

The basic training course BOSIET can be booked as a 5-day-intensive training course or subdivided into one-day-modules. It consists of the following parts:

- ▶ Working at heights / Fall Protection System / Personal Safety Equipment (PSE)
- ▶ First Aid (refresher focused on offshore relevant scenarios)
- ▶ Sea survival
- ▶ Helicopter Underwater Escape Training (HUET)
- ▶ Fire awareness



Training by Deutsche WindGuard is based on the international safety standards set for the oil & gas industry and the seafaring industries (developed by the International Convention of Training Certification and Watchkeeping for Seafarers). The BOSIET (Basic Offshore Safety Induction & Emergency Training) is certified by the Germanischer Lloyd (GL) and approved as advanced vocational training by the German Labour Bureau.

Deutsche
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The Wind Professionals

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