

OFFSHORE WIND DEVELOPMENT

With more than 70 years of experience in the offshore sector, we understand owners' and operators' need to enhance operational efficiencies with sustainable energy solutions.

In 2012, ABS certified the first semisubmersible offshore wind turbine WindFloat 1. Since then, ABS has remained a trusted advisor by providing classification, and independent verification and certification services for offshore wind projects globally.

SETTING GLOBAL STANDARDS FOR OFFSHORE WIND TURBINE PROJECTS

Currently, ABS remains at the forefront of technology assistance to the growing floating offshore wind power industry, working with designers and operators to identify risk and evaluate data-driven risk and reliability solutions for these new installations. ABS has been instrumental in the formulation of global standards for wind platforms, notably working with the International Electrical Commission, IEC, on global standards for the design and fabrication of floating wind installations. ABS is also heavily involved in the American Wind Energy Association (AWEA)'s Offshore Compliance Recommended Practices initiative, tasked to develop an ANSI standard for the U.S. Offshore Wind Farms.

LEADING CLASSIFICATION SERVICES

In 2011, ABS published the *ABS Guide for Building and Classing Bottom-Founded Offshore Wind Turbine Installations* followed by the *ABS Guide for Building and Classing Floating Offshore Wind Turbine Installations* in 2013. ABS also published the *Guidance Notes on Global Performance Analysis for Floating Offshore Wind Turbine Installations*,

as technical guidance in addition to applicable industry standards and regulations. These documents offer the necessary direction for the development of offshore wind turbine installations to ensure regulatory compliance.

ABS can assist in all phases of a project development, from concept development, design, manufacturing, installation and decommissioning.

EARLY STAGES

ABS can provide preliminary planning and advice (PPA) in advance of the project certification process.

CONCEPT VERIFICATION

ABS can provide verification services on system level as well as component level to verify the feasibility or readiness level of a concept.

DESIGN VERIFICATION

ABS will review the detailed design of the wind turbine support structures as well as mooring, mechanical and electrical systems and verify that the wind turbine generators (WTG) type certificate meets the site-specific conditions at the planned offshore location.

MANUFACTURING VERIFICATION

ABS conducts inspections during the fabrication of the floating support structure and mooring. ABS will issue approval based on design verification, evaluation of quality control, testing, and measurements.



INSTALLATION SURVEY

To minimize the risks associated with installation, ABS surveyors will verify conformity with the design basis requirements.

COMMISSIONING SURVEY

ABS will review commissioning procedures including verifying personnel safety features.

IN-SERVICE INSPECTION

To verify that the required standards are maintained throughout the lifetime of the floating wind turbine, ABS will perform periodic annual surveys and inspections of the floating support structure as well as mooring, mechanical and electrical systems.

WORLD HEADQUARTERS

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