

OFFSHORE WIND POWER

SAFE, RELIABLE & VIABLE



**BUREAU
VERITAS**

SAFETY, QUALITY AND PERFORMANCE THROUGHOUT THE LIFECYCLE

Bureau Veritas supports your fixed and floating wind projects with dedicated solutions for blades, gearboxes, generators, towers, foundations (monopile, jacket, tripod & gravity base) and offshore substations.

Safety, quality and performance are paramount when developing and operating offshore wind power installations. Bureau Veritas is with you every step of the way

throughout the asset lifecycle to ensure projects run safely and efficiently.

Our experts act as your eyes and ears on the ground throughout asset origination, project development and project deployment.

Thanks to our certification services, you have the certainty that your projects comply with regulations and industry standards.

OWNER'S ENGINEERING • TECHNICAL ADVISORY • INSPECTION & CERTIFICATION



CERTIFICATION

Demonstrate compliance & secure viability

- Approvals in Principle
- Prototype certification
- Component certification
- Type certification
- Project certification



DESIGN & PERMITTING

Reduce development risk

- Wind resource and Meteocean assessment
- Site Assessments (energy yield analysis, site suitability, micrositing, noise)
- Geotechnical and geographical assessments
- Aviation and navigation aids assessment
- Grid connection assessment
- Design review
- Environmental and social impact assessment
- Permitting support
- Due diligence
- Investor / lender services
- Subsea power cables: IAC and EC (technology assessment and certification)



PROCUREMENT

Access a global, reliable supply chain

- Supply chain technical assessment
- Technical procurement support
- Shop inspections (QA/QC)
- Expediting
- Factory acceptance tests
- Transport, loading & unloading supervision



CONSTRUCTION

Run projects safely and to schedule

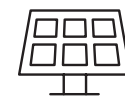
- Project & construction management support
- On site QA/QC
- On site HSE
- Turbine foundation supervision
- Marine warranty services
- Installation vessels assurance and selection
- Crane inspections
- Commissioning and test run supervision
- Take over and end-of-warranty inspections



ASSET OPERATION

Ensure availability & shorten outage time

- Periodic inspections of blades & main components (statutory or voluntary)
- Non-destructive testing
- Vibration monitoring
- Thermographic inspections
- ShaftTest© (ultrasonic shaft inspection)
- Oil and grease condition monitoring
- Endoscopic inspections
- Rotor balance inspections
- Failure & damage analysis
- Performance monitoring and analysis



ASSET MANAGEMENT

Extend operating life & increase performance

- O&M certification and management
- Maintenance strategies
- Condition monitoring & assessment
- Asset integrity management
- Reliability engineering
- Performance optimization
- Cyber Security assessment
- Turbine digital twin
- Remaining life assessment, lifetime extension and life management
- Repowering and decommissioning support
- M&A
- Owner's engineering



**PROJECT
CERTIFICATION
DE-RISK YOUR
VOFFSHORE WIND
PROJECT**

Bureau Veritas certifies your offshore wind projects and assets to ensure they meet industry standards and are commercially viable. We enable companies to demonstrate regulatory compliance and reliability through certification of prototypes, components, types and projects. Our Approvals in Principle and certification services support innovation in the emerging floating wind sector.

SHAPING A WORLD OF TRUST

Bureau Veritas is a Business to Business to Society company, contributing to transforming the world we live in. A world leader in testing, inspection and certification, we help clients across all industries address challenges in quality, health & safety, environmental protection and social responsibility.

POWER FOR TODAY AND TOMORROW

Your partner in the energy transition, Bureau Veritas helps society to meet today's energy needs and transition to a low-carbon future.



**BUREAU
VERITAS**

Shaping a World of Trust

For more information
contact Bureau Veritas:

Le Triangle de l'Arche
8 cours du Triangle, CS 90096
92937 Paris La Défense Cedex
FRANCE

bureauveritas.com

