ABS Group

05

DISMANTLING

Lifecycle of a Wind Farm

01 **PROJECT PLANNING** 02 **A DESIGN AND ENGINEERING** Lifecycle of a **NSTALLATION Wind Farm OPERATION AND** MAINTENANCE

OT Cybersecurity

- · OT Security Program Management (PM)
- OT Security Management Plan (OSMP)
- Vendor Management Plan (VMP)

Safety Risk Analysis

- Safety Studies
- · HAZID, HAZOPs
- · Offshore Safety Case
- · Independent Design Reviews
- · Regulatory Compliance
- · Component Certification

Technical Risk Analysis

- · Third Party Endorsement
- Structural Integrity
- Gap Analysis

Risk Management

- · Engineering Analysis
- · Project Management
- · CVA
- Owner Rep
- Due Diligence

Technical Risk Analysis

- · Manufacturing Inspections and Supervision
- · Quality Assurance Audits

OT Cybersecurity

- Cyber Inspection and Test Process
- · Detailed Risk Assessment (DRA)
- Risk Mitigation Plan (RMP)
- · Supply Chain Risk Management

Reliability

• Design for Reliability / Maintainability

Risk Management

- Project Management
- CVA
- Owner Rep

OT Cybersecurity

- Cyber Inspection and Test Validation
- Cyber Acceptance Test Support

Reliability

- · Asset Identification / Asset Walkdowns
- PandID Redlines Develop ment of MAL
- Development of ACR
- · Initiate CMMS
- · Data Cleansing and Loading

Risk Management

- · Project Management
- CVA

Safety Risk Analysis

- · Incident Investigation Training
- Offshore Emergency Response Planning HAZOP, HAZID and HAZAN

Reliability

- PM and SOP Analysis
- Asset Strategy Optimization
- · Planning and Scheduling
- Initiate CMMS
- · Data cleansing and loading

Safety Risk Management

· Safety Studies (HAZOP,

HAZID)

Technical Risk Analysis

- · Structural Integrity Assessments
- Materials and Corrosion Engineering
- · Design Verification of
- Foundation and Structure

OT Cybersecurity

- · Cybersecurity Risk Management Strategy
- Managed Detection and Response
- Managed Services
- · Maturity Assessment
- Independent Load Modelling Incident Response Planning
- Policy Development
- · Identity and Access Management
- · Penetration Testing
- Whitelisting
- Hardening

Risk Management

- RBI Development
- CVA
- ISIP
- AIM
- Life Extension
- Root Cause Failure Analysis

Technical Risk Analysis

of Plant and Equipment

Assessment

· Engineering Substantiation

· Civil-Structural Design and

Reliability

· CMMS Data Remediation

Risk Management

- · Aging Asset Life Extension
- · Rerate, Repair, Alteration Calculations
- AIM / MI Program Gap Analysis
- · Regulatory Requirements Audit