Alstom Grid | Services
Offshore grid connection
Reliability of offshore wind energy is essential for optimising profitability, especially under challenging conditions. Alstom Grid delivers complete cost-effective services to improve performance in the long term: full platform operations, lifecycle assets management, advanced maintenance and tailored modernisation.

Customer challenges
Wind energy will play a vital role in the world’s future energy supply. Wind energy capacity is extending around the world, resulting in growing needs for wind operations and maintenance. Maintain the efficiency and reliability of the transmission links to the grid are the main challenges for equipments in remote areas operating in critical climatic conditions.

Main offshore challenges:
• Return on investment with efficient solutions in the long term operating at optimum capacity
• Capacity to answer grid code requirements and ability to be reactive in case of disturbances or emergency
• Availability of qualified technicians working in safety conditions at all time
• Full equipments maintenance with critical assets management with guaranteed availability/delivery time
• Complete and cost-optimised operations of the offshore platform

Alstom Grid’s solution
Alstom Grid continuously support customers in connecting offshore wind farms to the grid: from project design, through erection and commissioning to full operations and maintenance of offshore platforms, AC and DC links to onshore substation.

Project design
To get the most of the offshore windfarm investment, Alstom Grid offers integrated range of consulting: network calculations, electrical interconnection planning, erection and commissioning, tests and performance analysis.

Erection and Commissioning
Alstom Grid erects, tests and connects wind farm to the grid respecting local standards. To ensure on-time delivery and quality, the expert team is set up close to the site.

Customer benefits
• Controlled and optimised return on investment
• Predictable maintenance costs
• Customised offer adapter to specific needs
• Complete range of services to ensure equipment continuity and availability
• Improved performance and reliability
• Efficient asset management and lifetime extension
• Emergency support and customised response time
• Experienced and trusted partner
• Proximity and availability of dedicated qualified technicians
• Single point of contact
Tailored maintenance and operations

Alstom Grid offers three levels of maintenance and operations to optimise on the long term your asset performance and return on investment.

> Expertise
To keep wind farm connections to the grid operating efficiently and to ensure optimum performance, preventive maintenance is recommended for key components. Maintenance operations are regularly planned and range from visual inspections by trained specialists to the replacement of used parts. Preventive maintenance is the most effective way to avoid potential troubles before they occur. Through preventive maintenance, outages can be planned and executed within the shortest delays and with the least disruption.

> Performance
In addition to planned maintenance, corrective maintenance is a valuable solution ensuring the optimised availability of necessary equipments. In case of failure or disturbance, trained experts can be sent to the site promptly to diagnose and repair. Alstom Grid provides a complete record of all work carried out during emergency support or the upgrade. Corrective maintenance ensures installation’s continuous performance.

> Serenity
Full management of grid connection maintenance and operations guarantees the maximum output. Advanced data are proficiently analysed to plan strategically maintenance and operations. Alstom Grid manages spare parts strategic inventory to ensure high availability of main components. With Alstom Grid’s partners, maintenance and operations can cover the whole scope of grid connection: access by helicopter or vessel, generators, lighting, alarms, lifesaving equipment, firefighting equipment, wave and weather monitoring. Service solutions are completely tailored to customers’ needs and to the offshore environment. Alstom Grid is fully responsible of the grid connection’s performance.

Condition monitoring

Advanced connectivity and information received from installed monitoring tools provide full assessment of customers’ equipment in real-time. Alstom Grid experts evaluate the current state of the equipment, define scope of maintenance operations and plan future required actions. This enables a better match of intervention teams, spare parts replacement and special tools management, saving down-time and costs, avoiding unexpected situations and maximising the electrical system’s availability. Alstom Grid can provide a 24/7 condition monitoring.

Dedicated and adaptable experts

Operational experts
Special trained, qualified and certified engineers and technicians ensure safe, timely and practical completion of the operations and maintenance. Owing to Alstom Grid’s worldwide presence, customers benefit from a large experience regarding the local utilities, the gathered know-how and local grid standards and certifications. Alstom Grid’s experience makes the difference to get optimal output, especially when field expertise is combined with project management competencies.

Health and safety
Safe operations and access are the main challenges in the offshore environment. Risk assessment, proven procedures, qualifying training and experience ensure technicians team to operate within international standards.

Availability and reliability
Response time is a critical aspect in remote areas. Alstom Grid proposes 3 attendance levels:
• Online Technical Support (OTS)
• First Operational Support (FOS)
• Expert Operational Support (EOS)

Condition monitoring allows planned service operations to maximise availability and reliability.

Technical training

Alstom Grid Technical Institutes provide continuous, and state-of-the-art trainings for technicians and experts to ensure safety, expertise and quality especially with technical qualifying trainings.