Submarine Power Cables
Cables for offshore wind farms
Power cables from ABB are proven to be highly reliable. Submarine power cables works, offshore platforms, wind farms etc. transmission and for connections between asynchronous net- works. ABB has acquired from installing submarine transmission cable interconnections around the world is now a valuable asset for the offshore wind, gas and oil industry. ABB has proven its capability to design and install an optimal cable system for a diverse set of applications, taking into account production costs, installation costs, power losses and operational costs.

ABB has the know-how and resources to provide a complete set of services from design to commissioning.

− Cross-linked polyethylene (XLPE) cable systems for AC
− HVDC Light® cable systems for DC
− Mass-impregnated paper-insulated (MI) cable systems for DC
− Cable accessories
− Offshore cable laying, installation, burial and protection
− Project management and commissioning

Submarine power cables
Power cables from ABB are proven to be highly reliable. XLPE cables possess high chemical resistance to oil and solvents, excellent tensile strength and high abrasion resistance. The cables can withstand high short-circuit temperatures and the dimensional stability above 90°C is very good. XLPE cables also have a high AC voltage breakdown strength. ABB can also offer dynamic power cables which can accommodate the movement of floating platforms. The HVDC Light cable system is advantageous for long distance modulate the movement of floating platforms.

AC cable offshore applications:
− Humber Gateway offshore wind farm, UK
  2x14 km, 220 MW, 132 kV shore connection power cables with Cu conductors and integrated fiber optics.
  Customer: E.ON Climate & Renewables UK Humber Wind Ltd
− Thornton Bank Offshore Wind Farm Phase 2 & 3, Belgium
  38 km, 150 MW, 150 kV shore connection power cable with Al conductors and integrated optical fiber cable and 26 + 34 km 33 kV inter-turbine cables with Al and Cu conductors and integrated optical fiber cable.
  Customer: C-Power NV
− Nordsee Ost Offshore Wind Farm, Germany
  63 km, 33 kV inter-turbine cables with Al conductor and integrated optical fiber cable.
  Customer: RWE Innogy GmbH
− Thornton Bank Offshore Wind Farm, Belgium
  38 km, 150 MW, 150 kV shore connection power cable with Al conductors and integrated optical fiber cable and 4 km 33 kV inter-turbine cables with Al conductors and integrated optical fiber cable.
  Customer: C-Power NV
− Princes Amalaiwindpark (Q7), the Netherlands
  28 km, 120 MW, 170 kV shore connection power cable with Cu conductors and integrated optical fiber cables and 40 km, 24 kV inter-turbine cables with Al and Cu conduc- tors and integrated optical fiber cable.
  Customer: Q7 Holding/ENECO
− Lillgrund Offshore Wind Farm, Sweden
  33 km, 110 MW, 145 kV shore connection power cable and 36 kV interturbine cables with Cu conductors and integrated optical fibers.
  Customer: Siemens Wind Power
− Burbo Banks Offshore Wind Farm, UK
  40 km, 90 MW, 36 kV inter-turbine and shore connection power cables with Cu conductors.
  Customer: Seascape Energy Ltd.
− Ytre Stengrund Offshore Wind Farm, Sweden
  22 km, 10 MW, 24 kV inter-turbine and shore connection power cables with Al conductors and integrated optical fibers.
  Customer: Enron Wind GmbH
− Utgrunden Offshore Wind Farm, Sweden
  11 km, 10 MW, 24 kV inter-turbine and shore connection power cables with Al conductors and integrated optical fiber cable.
  Customer: NEG-Micon

Some of our references

DC cable offshore applications:
− DoWin2 Offshore Wind Project, Germany
  2x45km, 900 MW, +/-320 kV HVDC Light® submarine power cables with Cu conductor and 2x90 km, 900 MW, +/-320 kV HVDC Light® underground cables with Al conductor. 2x12 km, 200 MW, 155 kV AC submarine cable with Cu conductors and integrated optical fiber cable.
  Customer: TenneT Offshore GmbH
− DoWin1 Offshore Wind Project, Germany
  2x74 km, 800 MW, +/-320 kV HVDC Light® submarine power cables with Cu conductor and 2x90 km, 800 MW, +/-320 kV HVDC Light® underground cables with Al conductor. 2x125 km, 400 MW, 155 kV AC submarine cable with Cu conductors and integrated optical fiber cable.
  Customer: transpower GmbH
− BorWin1 Offshore Wind Project, Germany
  2x125 km, 400 MW, +/-150 kV HVDC Light® submarine power cables with Cu conductor and 2x75 km, 400 MW +/-150 kV HVDC Light® underground cables with Al conductor.
  Customer: transpower GmbH

Reliable power cables and installation services from ABB