NROC Cable Maintenance

Engineering a clean & connected future

Global Marine Group is an innovative market leader in offshore engineering and consists of four business units CWind, Global Marine, Global Offshore and OceanIQ delivering a comprehensive range of services to the telecommunications, offshore renewables, utilities and oil & gas sectors, with a shared track record of successful project execution.
Export faults have a big impact on the energy transportation from a offshore windfarm. This can be partly mitigated by multiple export cables or meshed grid.

Financial losses are also onerous – on average the losses from an 6MW turbine are $13,500/day.

Special considerations for an export cable repair – shallow water/surf zone, de-burial & re-burial, cable crossings and associated protection, and sub-station or HDD interface.

Typical repair scenarios;
  › Replacement shore-end
  › Two joints and insert of spare cable (length of inserted cable driven by fault type, and water ingress)
  › Replacement at offshore substation, potentially need to replace the CPS as well
Cable Repair Lifecycle

1. Fault Location
2. Procedures & Engineering
3. Mob of Marine Spread
4. Loading of Spare Parts
5. Survey, De-burial, Cut & Recovery
6. Lay of Repair Joint & Cable
7. Testing
8. Survey & Burial / Protection
9. Return of Spare Parts
10. Demob of Marine Spread
Cable Repair Vessels

Global Symphony
Normand Clipper
Normand Cutter
Shallow Water Barge
Jack-up Barge
Walk to Work (W2W)
Cable Repair Assets

- Cutting Tool
- Work Class ROV (WROV)
- Control Flow Excavator (CFE)
- Power Cable Joint
- PLP240
- Q1400
Lessons from Europe

- Statistically there is one repair/year for every 1000km of installed export cable.
- The Offshore Wind market is insurance lead. Cable repairs account for 83% off all the claimed costs.
- Average duration for the repair of an export cable is 100 days, and the average repair cost is $24m.
- Both of these stats represent poor value of money and the insurance market is hardening, particularly with regards to cables.
- Cable repair is a fragmented market with cable maintenance provided via Frameworks, often non-exclusive providing no guarantee of response.
- Exclusive Frameworks are now emerging, but vessel availability can be an issue. Vessels need to be sourced from the market at times.
- GO have entered Ørsted’s IA cables into ACMA given more certainty of vessel availability.
- Asset owners’ preparedness is improving – records management, documentation, live cable/field procedures, spares, and SAP all important for repairs.
- Pre-agreed repair scenarios for marine licencing.
- Industry collaboration not happening, however it would result in efficiencies and reducing costs.
- Market transparency and sharing of fault data would enhance communication and improve collective knowledge.
Management and storage of spare cable and accessories is very important. Spares cannot just be left in storage; they need to be inspected, tested, and maintained.

Global Marine Group have storage depots in the UK in Portland, and Blyth with specialist cable storage facilities.

Lessons can be learnt from the telecoms industry and pooling of accessories and cable would result in efficiencies and cost savings.