

Offshore wind: Communication infrastructure



The offshore wind communication landscape

TETRA repeater

Enabling reliable communication INSIDE the turbines where you will normally have ZERO connectivity.

Microwave Radio System (LOS)

High speed data point-to-point solution often used as a main connection between onshore and offshore during construction, and later used to increase availability in case of fibre connection outage.

Private LTE network

LTE is a standard for 4G wireless broadband technology offering network for mobile device users - creating a communication system and network/office even on ships, wind turbines etc., securing an environment with full internet access.

TETRA mission critical communication

A fully redundant TETRA solution enables direct calls between a TETRA terminal and telephone networks, ship radio systems, helicopter radios, and traditional UHF on-board radios.

SemPAM - people and asset management

SemPAM significantly strengthens your HSE performance by improving the levels of health and safety for workers offshore. The system manages and controls the day-to-day activities through real-time situational awareness of the relevant people, assets and areas.

SemPAM is a turnkey software and communication solution that provides effective safety introduction, administration, planning and tracking of personnel.

First, establish reliable communication lines!

First step in gaining control of all activities of an offshore wind farm is to establish reliable communication lines:

- During the construction phase when fibre lines and cables are not yet established, we recommend establishing »blue water communication« using radio link and satellite connections.
- We establish a reliable and redundant TETRA connection between all vessels, turbines, the offshore substation, the onshore office and helicopters to enable direct calls.
- We recommend combining your redundant TETRA system with your own private LTE network (wireless broadband). This will connect your offshore wind farm to the rest of the world - and you can set up offices, work and live offshore with the same level of connectivity as you would expect onshore.

Operational telecommunication systems

Once a solid communication infrastructure has been established, Semco Maritime further delivers various operational telecommunication systems such as:

- SemSound PA/GA for announcements and alarms.
- Closed Circuit Television (CCTV) for visual remote monitoring of substations and turbines.
- IP Network for interconnection of onshore and offshore based systems.
- Radio Dispatcher for advanced voice communication.
- Marine and Aeronautical communication with vessels and helicopters.
- Metrological system for remote offshore weather monitoring.
- Voice logging systems for replay of historical events.
- Telecommunication Monitoring System securing high availability and trace of faults.
- AIS and ADS-B/AtoN for tracking of vessels and helicopter locations.

40 years of reliable offshore communication

Since 1980, we have built up expertise as a multi-disciplined engineering, procurement and construction (EPC) contractor. Today, we apply this EPC expertise to the offshore wind sector.

We deliver turnkey offshore wind projects and we are capable of covering all phases - from FEED studies to engineering, procurement, construction, installation, offshore commissioning and not least service & maintenance throughout the lifetime of your wind farm.

In-house telecommunication specialists

Our in-house telecommunication specialists design telecommunication solutions based on factors such as the capacity, functionality, distance and physical environment at the site in question. We supply a broad range of transmission and data communication solutions, and we always integrate our systems into packages that are easy to use, simple to service and inexpensive to maintain.

Our telecommunication engineers have an innovative approach to communication systems that is based on 40 years of solid experience with delivering everything from data network and radio links to navigation and monitoring systems.

Service and maintenance

With a one-stop-shopping service concept, we offer to service all telecommunication systems and equipment. You choose the service level that suits you best - ranging from mandatory or ad-hoc service to full-scale service including remote access support and monitoring of the systems. Our service teams rely on experience gathered from all phases of offshore wind projects; FEED studies, design, construction and commissioning.

→ CONTACT



Per Holgersen
Business
Development Manager
Tel. +45 2075 8050
pho@semcomaritime.com

→ WATCH SEMPAM VIDEO



Watch this video to see how SempPAM lets you manage all people and assets. The result is an impressive logistic efficiency and improved safety performance.



About Semco Maritime

Semco Maritime is an international engineering and contracting company dedicated to projects in the energy sector. Since 1980, we have been facilitating design, fabrication, service and maintenance of our customers' assets, providing comprehensive project management across all phases of energy projects.

Semco Maritime is based in Denmark but has branches in Norway, Germany, the UK, Singapore, China and the US.

Safety is part of our DNA and our first priority is to safeguard people, the environment and your offshore assets!

For further information, please contact us or visit our website:

Semco Maritime
Esbjerg Brygge 30, DK-6700 Esbjerg
Tel. +45 7916 6666 / semco@semcomaritime.com

www.semcomaritime.com

Semco Maritime A/S is third-party certified:

- ISO 9001
- ISO 14001
- ISO 45001
- ISO 3834-2

Achilles Certifications:

- FPAL
- Achilles JQS
- Utilities NCE
- UVDB