

TRBOCALL ENHANCES EQUINOR'S ONSHORE CONNECTIVITY FOR WORLD'S LARGEST OFFSHORE WIND FARM



Equinor invited Eemits to provide a seamless digital two-way radio solution to connect two remote onshore converter stations with the operations and maintenance (O&M) base so workers could carry out tasks safely and efficiently.

THE CHALLENGE

Dogger Bank will become the world's largest offshore wind farm when the three phases are completed, and Equinor will operate the wind farm for an expected 25 years.

A seamless digital two-way radio solution to connect their two remote onshore converter stations (Creyke Beck) with their operations and maintenance base (Tyne Dock) was required.

In addition, the O&M base needed a system to aid with the embarkation and disembarkation of personnel to and from the support offshore vessels (SOVs) as well as facilitating the warehouse, facilities and security teams' day to day activities and safety around the base.

Being able to communicate with operatives on the SOVs when dockside was vital to the smooth running of the windfarm so that spare parts could be effectively loaded and unloaded from the warehouse to the vessel.

The system needed to handle multiple voice calls and create multiple user groups so that radio users could communicate within their own group without interference as well as the ability to communicate with other groups and every radio user if the need arose.

Private one-to-one calling features and the ability pre-defined texts and free form texts were also needed when messages are needed to be sent quickly.

To achieve this, Eemits deployed a Tier 1 TRBOCALL system that is rapidly deployed and remotely managed.



PRODUCTIVITY
up



EFFICIENCY
raised



SAFETY
increased

THE SOLUTION

We installed our ultra-smart digital two-way radio solution - TRBOCALL – a modular platform comprising the following:



INFRASTRUCTURE

Equinor Opted for:

Capacity Max

What is Capacity Plus

Capacity Plus is a scalable, single-site digital trunking solution.

Over 10,000 radio users can share critical voice and data communication on the same system.

The Benefits:

TRBOCALL is based on the Motorola Capacity Max system architecture that deploys systems at sites that contain Motorola's SLR5500 repeaters coupled with a UHF antenna system to provide 100% coverage at each converter site.

As the system is cloud-based, it is rapidly deployed at each site and is remotely managed and can be monitored in real-time for remote diagnostic fixes. At the same time TRBOCALL can control the functions and features of the radios remotely without the need to recall radios from the field. All of these are aimed at reducing and eliminating down time to operatives in the field.

Systems were deployed at the two converter stations and the O&M base which were connected to the TRBOCALL hub using secure VPN connections with automatic failover in the unlikely event that the primary VPN connection is lost.

The systems were also deployed with 8-hour battery back up in the event of total power failure at any of the sites. Ultimately the TRBOCALL sites are deployed to provide mission critical communications that must work when other systems fail.

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HARDWARE & ACCESSORIES

Equinor chose:

Motorola Solutions R7 Premium full- keypad Radios



The Benefits:

The Motorola R7 Premium full keypad radios were given to the O&M team members that served as a communication device as well as an invaluable health and safety tool.

The added advantage of the R7 is that it is a rugged and robust device that could stand up to the tough operating environments found in the renewable industry.

Tyne Dock staff also utilise remote speaker microphones, cases and straps, and Bluetooth earpieces. Both single-unit and multi-unit chargers were also provided for optimal charging.



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FEATURES & SOFTWARE

Equinor chose:

TRBOCALL Web Data Client

Panic Alarm

Lone Worker

Man Down

Voice Recording

GPS Location Tracking
Geofencing

The Benefits:

Web data interface for greater functionality

The Web Data Client module allows access to TRBOCALL PLUS data functionality from a web interface. Data functionalities include - radio check and radio kill, real-time location monitoring with detailed reports, text messaging and radio registration.

Emergency alarms and lone worker features

As the converter stations are remote then worker safety becomes paramount. TRBOCALL comes with a range of advanced worker safety features that have been deployed and these include panic alarm, lone worker, and man down alarms.

When these alarms are triggered, the system notifies a range of responders from the dispatch team at the O&M base, to coworkers nearby and or external third-party responder agencies. The emergency when triggered follows a prescribed escalation route as defined by Equinor to ensure that the alarm is never missed and responded to appropriately.

GPS location tracking in crucial moments

When the alarm is raised it also contains vital location details that pinpoints the exact location of the worker in distress both externally, using GPS and within buildings, using internal location beacons.

Voice recording for investigative purposes

TRBOCALL records every voice and data message so that these can be replayed post incident for investigative purposes and to help train personnel in the correct use of radios in an emergency.

Automatic Registration System and geofencing

The built-in Automatic Registration System (ARS) coupled with the ability to create Geofences around the sites within the system lets the dispatcher at the O&M know when teams arrive and leave the converter stations so that they know when to monitor.

THE SOLUTION

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SERVICE WRAP

Equinor chose

60-month Managed Service with:

Business Hours Telephone Support

Business Hours Onsite Support

Motorola R7 Premium 5 Year Enhanced Warranty & Repair

Reactive Maintenance

Preventive Maintenance

Remote Health Check Maintenance

The Benefits:

To ensure that the system operates with uninterrupted service it is further supported by the Eemits Communications Service Wrap provision.

This includes telecare support services, with a direct number to engineers - providing fast and accurate turnaround to any issues, rapid reaction to onsite faults where remote diagnosis and fix is not achievable; preventative site maintenance or 'health check' to get eyes on the equipment at site to ensure operating parameters and the environment hasn't changed as well as ensuring the equipment is operating at optimally.

Annual visits are accompanied with reports highlighting defects found, and opportunities to improve the system; hardware 'hot swap' to ensure that the systems maintain their operating integrity and hardware repair of any defective radio equipment.



WHAT THEY SAY ABOUT US:

SUMMARY

Equinor now has a multi-purpose Capacity Max system in place to support O&M activity for the world's largest offshore wind farm project.

Their team is equipped with the latest in radio technology to ensure workers are safe, productive, and operations are as efficient as possible.

Eemits innovative modular platform TRBOCALL - a unique combination of hardware, bespoke software applications and digital features - together create an ultra-smart two-way radio system. Combined with unrivalled wide area network coverage, our customers have the flexibility to build their own system with all, or a combination of infrastructure, hardware, software service wrap, features and accessories that suite their individual business needs.

EEMITS CLIENTS BENEFIT FROM:

Productivity increased by up to

40%

PER SITE

Efficiency raised by up to

1 hr

PER EMPLOYEE PER DAY

Safety increased for

100%

OF YOUR WORKFORCE VIA DIGITAL RADIO WHERE EVER THEIR LOCATION