

AIS networks in the Offshore Power Generation environment

Maritime Automatic Identification System [AIS] networks have a vital role to play in the marking and protection of offshore power generation systems by marking the generating equipment and a guard area around the power generation equipments.

Case Study

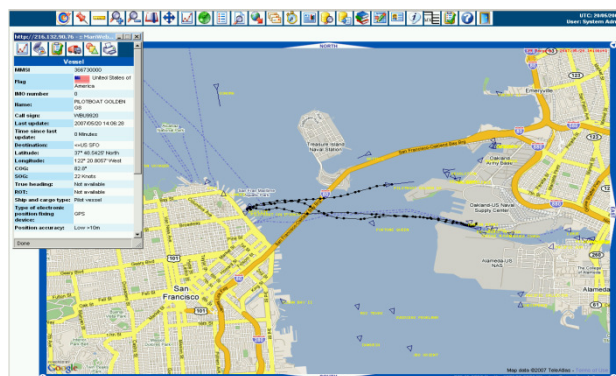
Consider a vessel approaching an offshore wind farm at night. Having an AIS Aid to Navigation transponder on some of the wind turbines will make these visible to the vessel if the mariner is watching the AIS display.

The **MariWeb™** system detects that the vessel is approaching the wind farm and then sends an addressed message via the **MariWeb™** AIS network to the vessel indicating that the vessel is approaching the wind farm. With the same AIS network infrastructure, the **MariWeb™** system is able to mark all offshore wind turbines with a virtual Aid to Navigation.

On the shore side, the operator of the wind farm is able to see that the vessel is approaching the wind farm and could enter the protected area.

When the addressed AIS warning message is sent to the vessel, the operator sees that it has been sent and also sees that a copy of the message is recorded in the audit trail. The audit message is received

from a separate AIS receiver and is used to make sure that the warning message was actually transmitted to air.



All the while, the wind farm operator is collecting the AIS data that will show the actual path taken by the vessel and is able to display this over the latest navigational charts as well as the engineering drawings of the off shore wind farm that are stored and displayed on the same GIS system that is built into **MariWeb™**.



Benefits

The **MariWeb™** system promotes safety, security, has economic advantages and assists in protecting the environment. AIS transponders are now being fitted to pleasure craft adding to the number of vessels that can be actively monitored and should a radar system also be integrated, then all vessels can be included in the **MariWeb™** monitoring system.

Safety

Vessels are prevented from entering off shore power generation environments by being marked and proactively by receiving AIS messages that generates warning alerts to the mariners.

The shore side monitoring of the off shore environment allows the operators to proactively deal with any intrusion in co-operation with the maritime authorities using an independent system to that of the authorities.

Security

All vessels entering the area equipped with AIS units are clearly identified. **MariWeb™** is able to integrate automatically acquired ARPA targets from a radar system and this allows the inclusion of vessels without AIS transponders.

Economic

The protection of the assets limits liabilities and reduces risk and operating costs.

Environmental

The improvement of safety and the protection of the off shore asset also protects the environment from any pollution as a result of an incident.

MariWeb™

MariWeb™ is a low cost, high performance, feature rich and standards based AIS network that implements all the features required of a system that is compliant to the IALA A-124 Recommendations and the associated IEC and ITU specifications. Additional innovative features make **MariWeb™** a unique maritime information tool.

MariWeb™ is installed on four continents and in seven countries.

Contact

IMIS Global Limited has offices in the United Kingdom, Greece, the USA and South Africa. To contact IMIS Global Limited please do so here:

25 Barnes Wallis Road
Segensworth
Fareham
Hampshire
PO15 5TT
England

Tel: +44 (0) 1489 889 843
Fax: +44 (0) 1489 889 801
Email: info@imisglobal.com