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France Energies Marines and France Cyber Maritime join forces to enhance offshore wind cybersecurity

France Energies Marines, the national research and innovation institute for offshore wind, and France Cyber Maritime, an association dedicated to strengthening cybersecurity in the French maritime and port sectors, have formed a strategic partnership to support the offshore wind industry in facing the growing challenges of digitalisation and cybersecurity.

The issues of energy sovereignty and cybersecurity of vital infrastructures necessitate the identification of risks, the development of protective measures and best practices, as well as the implementation of technological solutions to ensure the security of offshore wind energy production infrastructures. These issues are particularly important given that the infrastructures are located in environments highly exposed to risks, where operational response to an incident can be extremely complex due to access conditions. Therefore, interactions between the cybersecurity sector, maritime digitalisation, and offshore wind must be considered comprehensively, throughout the entire lifecycle of the wind farms, from the initial development phases to their operation.

Increasing challenges related to the digitalisation of offshore infrastructures

The rise of offshore wind is accompanied by increased digitalisation of infrastructures and support services for operations: hybridisation of industrial automation and digital infrastructures; distributed architectures (edge, cloud); advanced connectivity technologies (private 5G networks, satellite, encryption); connected sensors (IoT); big data, digital twins, and artificial intelligence for service monitoring; automation of inspections (drones, UAVs, ROVs); and remote environmental monitoring. This digital presence is essential to ensure energy production and maintain the operational conditions of the parks in an economically viable manner, but it also comes with exposure to cyber threats. As vital infrastructures, offshore electricity production and transport sites face critical and growing cybersecurity challenges, including regulatory compliance, as suggested by the implementation of the European Union's Net-Zero Industry Act (NZIA).

Combined expertise to address cybersecurity challenges

In this context, the partnership between France Energies Marines and France Cyber Maritime stands out as a natural alliance aimed at supporting the offshore wind sector in managing digital risks. This partnership will focus on several key areas:

- Co-authoring a white paper on cybersecurity applied to offshore wind, in collaboration with the Syndicat des Énergies Renouvelables (SER).
- Implementing joint awareness and training actions for sector stakeholders.
- Creating a directory of expert cybersecurity companies for offshore wind.

- Contributing to the development and testing of cybersecurity solutions specific to offshore infrastructures.

Through this cooperation, France Energies Marines will leverage its in-depth expertise in offshore wind and associated digital technologies, while France Cyber Maritime will bring its know-how in maritime and port cybersecurity.

Xavier REBOUR, Director, France Cyber Maritime



The maritime world has embarked on an unprecedented digital transformation. While digitalisation improves performance, safety, and competitiveness, it also introduces new vulnerabilities that can be exploited by cybercriminal groups, state actors, or hacktivists. Strategic in terms of sovereignty and energy mix, the renewable marine energy sector is highly concerned and not spared. Collaboration with France Energies Marines ensures that the operational, technological, and human specifics of the sector are well considered to jointly develop cybersecurity measures tailored to the entire lifecycle of the installations.

Herveline GABORIEAU, Executive Director, France Energies Marines



The digital footprint of offshore wind is already considerable. It extends from project to project and is characterised by a high degree of complexity resulting from the coexistence of multiple technologies with varying cybersecurity characteristics. This footprint also represents a surface where it is necessary to identify potential weaknesses and associated cyber risks to better protect, detect any incidents, respond if necessary, and restore. France Energies Marines develops numerous technologies based on digital use. This strategic partnership with France Cyber Maritime allows us to better integrate cyber issues into the technological support we offer to the sector.

About France Cyber Maritime

France Cyber Maritime is a non-profit association whose mission is to contribute to strengthening the cybersecurity of the French maritime and port sectors. To achieve this, it encourages the development of cybersecurity solutions specific to the sector, supports operators in their cybersecurity efforts, and operates the M-CERT (Maritime Computer Emergency Response Team), a national centre that provides information and assistance to the entire maritime and port world. With over 90 members, the association based in Brest includes public actors and coastal local authorities from mainland France and overseas territories, maritime and port operators, as well as cybersecurity solution providers. It is supported by the Directorate General for Maritime Affairs, Fisheries and Aquaculture (DGAMPA), Brest Métropole, the Brittany Region, the General Secretariat for the Sea (SGMer), and the National Agency for Information Systems Security (ANSSI).

For further details: <https://www.france-cyber-maritime.eu/fr/>

About France Energies Marines

France Energies Marines is an offshore wind energy research and innovation centre with a recognised industrial, economic and societal impact in France and internationally. Its mission is to remove the obstacles facing the offshore wind energy sector. Backed by the French government and supported by a multidisciplinary team of more than 90 staff, a network of international experts and unique infrastructures, the Institute conducts multi-partner research projects guided by excellence. The results are transferred to the industry in the form of research and expertise services, operating licences, know-how transfer and participation in expert committees and networks.

These activities are structured around four complementary thematic programmes: site characterisation, systems design and monitoring, farm optimisation and environmental integration. For further details: <https://www.france-cyber-maritime.eu/fr/>

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