WIND POWER ALLIANCE

Press release

Developing marine renewable energies: the institutes b<>com, France Energies Marines, Jules Verne and SuperGrid Institute create the Wind Power Alliance

Nantes, the 26th of June 2024 - During the Seanergy 2024 trade fair, a major event in the marine renewable energy sector, the institutes b<>com, France Energies Marines, Jules Verne and SuperGrid Institute announced the creation of the Wind Power Alliance. Combining the expertise and innovations of these four institutes, the alliance aims to enhance the deployment of new technologies for stakeholders in the wind energy sector, including manufacturers, developers, and equipment suppliers, thereby boosting the competitiveness of the entire industry.

Meeting the wind energy industry's challenges through innovation

The Wind Power Alliance is addressing the challenge of scaling up wind power, particularly offshore wind power, against a backdrop of accelerating development, construction and connection of wind farms. The aim is to bring together innovation leaders at a national level to transform the challenges of viability into innovations, with a view to deploying 18 GW of offshore wind power by 2035 and 45 GW by 2050.

Specifically, the alliance aims to tackle major challenges such as designing increasingly powerful offshore wind farms far from the coast, manufacturing and assembling very large components on a massive scale, connecting them to the power grid, and ensuring grid maintenance, surveillance, and safety. This comprehensive, technological approach will enable the alliance to meet the growing demands of the offshore wind industry and significantly contribute to its development.

To achieve this, the alliance will be involved at every stage of the offshore wind industry's life cycle, covering the entire value chain, with a strong commitment to supporting local businesses to ensure that this industry creates jobs in France.

The synergy of four institutes with complementary expertise

The Wind Power Alliance will focus on projects requiring advanced systems and technological expertise.

Each institute brings its own specific expertise and technologies to enhance the efficiency and sustainability of offshore wind farms:

- France Energies Marines specialises in design tools and technologies, as well as technologies for the in service, environmental, and socio-economic monitoring of wind farms.
- IRT Jules Verne excels in manufacturing processes and the recyclability of components, along with the capability to handle large-scale components.

- b<>com is dedicated to the connectivity and cybersecurity of wind farms, addressing the challenges of reliability and remoteness from the coast.
- SuperGrid Institute focuses on optimising the electrical architecture of wind farms, conversion, connection, and grid integration technologies.

The combination of these complementary areas of expertise ensures that the sector's technical and operational challenges can be met effectively.

The Wind Power Alliance has already committed to two collaborative projects. The first project, supported by France Energies Marines and IRT Jules Verne, focuses on the digitalisation of offshore wind energy. The second project, led by France Energies Marines and SuperGrid Institute, is centred on floating HVDC (high-voltage direct current) substations.

"The offshore wind energy industry is set to experience unprecedented growth over the next few years. This change in scale, coupled with the development of wind farms further from our coasts and amidst value chain tensions, requires strong collaboration across the sector. Thanks to their complementary nature, their agility and deep understanding of industry challenges, our institutes are working together to enhance competitiveness and boost employment in the sector" , explains **Herveline Gaborieau, Managing Director of France Energies Marines.**

"This alliance enables b<>com to invest in the renewable energy sector by leveraging our expertise in secure connectivity. Remote and autonomous sites, such as offshore wind farms, are sensitive and difficult to access, with significant operating and maintenance costs. We look forward to providing our innovative connectivity and cybersecurity solutions to the wind energy industry to enhance their competitiveness", *says* **Emmanuelle Garnaud-Gamache, Managing Director of b<>com.**

"At the IRT Jules Verne, we tackle the challenges of scaling up and technology transfer for industrialisation on a daily basis. With the rapid development of offshore wind energy and its increasing demands, this issue has become crucial for the industry. Our expertise in manufacturing processes, component recyclability, and extensive experience with large-scale parts uniquely positions us to support the industry through this transition. The Wind Power Alliance offers a unique synergy, ensuring our ability to deliver robust and innovative solutions that meet the demands of a rapidly expanding market. We are committed to providing excellent expert support to enhance the competitiveness of a sustainable and recyclable French wind energy industry", emphasises **Stéphane Cassereau, Director General of IRT Jules Verne.**

"With the rapid acceleration of wind energy, optimising the economics of wind farms and their grid connectivity is becoming increasingly crucial. This alliance serves as a catalyst for providing the industry with wind farm optimisation solutions and services developed by the Institute. These solutions will help define the optimum design of the AC collector grid, based on widely-used performance indicators for developers and prescribers, as well as methods for connecting wind farms using AC or DC. The combination of complementary skills from these four institutes is a major asset in delivering a comprehensive, integrated service to the industry." **Hubert De La Grandière, Managing Director of SuperGrid Institute**

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Visuals: https://drive.google.com/drive/folders/1nsTAm4zl_V7I-nsQTW1MIxT37DAZbRqa?usp=sharing

About b<>com

b<>com explores, designs and delivers tomorrow's digital technologies to accelerate transitions. Drawing on its team of industrialists and academics, the Institute of Research and Technology develops R&D projects to enhance the competitiveness of businesses. It promotes augmented intelligence and energy efficiency to improve industrial processes. The goal is to provide innovative solutions to market needs and meet the challenges of decarbonisation and digital trust. Its technologies are developed for critical infrastructure, defense, agri/agro, security, healthcare, Industry 5.0 as well as cultural and creative industries. Its experts develop innovative, secure digital technologies (cloud, cybersecurity, AI) that serve signal, content and network processing (connectivity, video & sound, digital twins, human factors).

b-com.com | LinkedIn
Press contact : Marion Carcreff / +33 6 38 27 98 99 / marion.carcreff@b-com.com

About France Energies Marines

France Energies Marines brings together and coordinates a range of scientific expertise and resources to validate standards and produce the innovations essential for the development of offshore wind energy. Recognised for its industrial and socio-economic impact, the Institute for Energy Transition relies on excellent R&D conducted by a multidisciplinary team of 90 employees and is structured around four complementary R&D programmes: site characterisation, system design and monitoring, optimisation of wind farms, and environmental integration. Thus, the research and innovation driven by the Institute focus on the main challenges related to the development of offshore wind energy, whether they are technological, environmental, economic, or societal. The Institute's capacity for pooling resources, with a model based on co-investment, allows for a considerable leverage effect in terms of efficiency and visibility for the benefit of French and European stakeholders.
france-energies-marines.org | LinkedIn
Press contact : Mathilde Roulin / +33 2 30 13 09 21 / mathilde.roulin@france-energies-marines.org

About l'IRT Jules Verne

IRT Jules Verne is the technological research centre dedicated to manufacturing. Working closely with production equipment manufacturers and integrators, IRT Jules Verne caters to 4 strategic industrial sectors: aeronautics, shipbuilding, the automotive industry, and energy. The IRT team works hand in hand with the very best industrial and academic resources in the manufacturing field. Its vocation is to improve the competitiveness of strategic industrial sectors in France by creating disruptive technologies for manufacturing processes. Its mission is to speed up innovation and technology transfer to factories. In its bid to provide comprehensive solutions up to scale-1 demonstrators, IRT Jules Verne installs and utilises a wide range of exclusive state-of-the-art equipment.
irt-jules-verne.fr | LinkedIn
Press contact : Landry Chiron / +33 6 85 50 39 12 / landry.chiron@irt-jules-verne.fr

About SuperGrid Institute

SuperGrid Institute is a privately owned company with expertise in high and medium voltage direct current (HVDC and MVDC) systems and technologies – key components of the energy networks of the future. Its work actively contributes to energy transition by removing technical barriers to the deployment of future power grids.
supergrid-institute.com | LinkedIn
Press contact : Amiel Kaplan / +33 (0) 771 322 898 / amiel.kaplan@supergrid-institute.com