PAYS DE LA LOIRE
OFFSHORE RENEWABLE ENERGY

Overview of regional partners and support organizations
Solutions&co: the regional economic development agency

This directory lists your main points of contact for the offshore wind & marine renewable energy sector in the Pays de la Loire region, Western France. It covers the following topics:

• Setting up in the region
• Regional, national and international Business and technology development
• Research, innovation, skills, training and education
• Logistics and supply chain

Solutions&Co is the regional development agency for the Pays de la Loire region. As such, we coordinate the regional marine renewables sector, helping businesses in the industry to grow and innovate in the region. This is what we do:

• provide information about government support schemes
• facilitate introductions to national and international main contractors
• promote the region’s marine renewables sector at international trade fairs
• conduct campaigns about skills and developments within the sector
• roll out a foreign investment attraction strategy with the Business Solutions service of Solutions&Co
• organise lead generation travel abroad
• provide expertise and guidance on European standards and regulations with the Europe Enterprise Network (EEN development solutions)

Contact details
emr@solutions-eco.fr
7, rue du Général de Bollardière, 44200 Nantes, France
business-solutions-atlantic-france.com
**Carene / Local development Agency for the Saint-Nazaire area**

**Setting up # Support for business projects**

Carene provides business support to new companies setting up in the Saint-Nazaire area. Its services include:

- Real estate solutions
- Help with recruitment
- Support for business growth and innovation, industrial partner searches, financing.

For the offshore wind and marine renewables industry, the Carene teams can identify real estate near or alongside port facilities, thus enabling businesses to locate to the heart of the local ecosystem (GE, Les Chantiers de l’Atlantique, Saint-Nazaire port logistics hub,...).

Website: www.agglo-carene.fr

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**Nantes Saint-Nazaire Développement / Economic Development Agency for the cities of Nantes and St-Nazaire**

**Setting up # Support for business projects**

Nantes Saint-Nazaire Développement helps businesses set up in Nantes and St-Nazaire. Services include:

- Organizing a feasibility study based on client specifications
- Identifying property solutions, supporting relocating staff, and providing recruitment expertise
- Organizing introductions with the business community and local authorities.

Website: www.nantes-saintnazeaire.fr/en

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**Atlanpole / Regional Business Incubator**

**Business support # Innovation**

Atlanpole, the regional incubator, provides customized support based on the unique business needs of innovative entrepreneurs. To turn smart ideas into successful businesses, Atlanpole offers coaching services on cross-cutting issues such as road-mapping, legal issues, fundraising, human resources, go-to-market strategies, and international development. The incubator program runs up to 5 years from the startup’s inception.

Innovation hub, Atlanpole represents several innovation clusters on maritime (pôle mer bretagne atlantique) and energy (S2E2) sectors. Through those clusters, the incubator fosters collaborative R&D projects in France and Europe.

Website: www.atlanpole.com

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**Team France Export / Business France and Regional Chamber of Commerce and Industry**

**Export # International development # Business**

Team France Export helps French businesses to find commercial partners in target markets, paving the way for them to sign trading agreements and generate sustainable export growth. As our advisors are sector-specific, Team France Export services can be tailored to the offshore wind and marine renewables industry.

Website: www.teamfrance-export.fr/entreprisespaysdelaloire

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**Neopolia / MRE business cluster**

**Cluster # Collaborative business projects # Business support**

Neopolia is a network of regional firms whose aim is to generate more business by working together. Its offshore wind and marine renewables business cluster has around 100 members. Many skills areas are covered, with design offices (engineering, environment etc.), the manufacturing industry (welding, assembly, special machines, etc.), logistics firms, main contractors, subcontractors...

The cluster draws on its members to offer 5 commercial “solutions”:

- Project development support
- Offshore installation support
- Operation & Maintenance
- System health monitoring
- Concrete monitoring in oceanic conditions.

Its motto is “Networking for your business.”

Website: www.neopolia.com
CEA Tech / Regional Technology Transfer Platform

CEA Tech is the French Atomic Energy and Alternative Energy Commission (CEA) technology research unit. CEA Tech acts as a catalyst and accelerator for innovation serving the French industry, particularly for SMEs and start-ups.

CEA Tech deploys its model through local technological research platforms adapted to the regional economic fabric. These platforms disseminate the Key Enabling Technologies (KETs) developed by CEA and provide innovation solutions through technology to industries in all regions. In Pays de la Loire, CEA Tech mainly performs research on offshore wind and marine renewable energy through its "marine adaptation of energy systems" platform, focusing on systems for power generation, conversion and energy storage in harsh marine environment.

Website : www.cea-tech.fr/cea-tech/english/

France Energies Marines / Institute for Energy Transition

This organization provides and promotes the scientific and industrial environment that is needed for breaking technology bottlenecks in the offshore wind and marine renewables industry.

Its service offer has two strands:

- Technical expertise on the environmental impacts of offshore wind and marine renewables (project management assistance to the project owner).
- Expertise in metocean resource characterization and modeling: structure design/dimensioning and characterization, including systems; mooring lines and dynamic cabling.

France Energies Marines has all the equipment, resources and validated methodologies to support project developers and technology providers in their offshore wind and marine renewable schemes.

Website : www.france-energies-marines.org/en/

IRT Jules Verne / Technology Research Institute

IRT Jules Verne is one of the French Institutes of Technology and provides manufacturers with R&D support for their products and processes in the following areas:

- Composite processes
- Metal Additive Manufacturing processes
- Robotics - Cobotics
- Structural health monitoring
- Structural simulation and processes

The institute enjoys acknowledged expertise in collaborative R&D project design and management.

Website : www.irt-jules-verne.fr/en/

LHEEA - Research Laboratory / Centrale Nantes & CNRS

LHEEA is the Research Laboratory in Hydrodynamics, Energetics & Atmospheric Environment. The LHEEA tackles its research problems by implementing a combination of approaches: numerical simulation, experiments at model scale (ocean tank) and experiments in natural site (SEM-REV, open sea test site).

The towing tank and wave tank are part of Europe’s largest facilities of this type. The experiments conducted can test a lot of equipment in their use environment, river or sea. The structures studied are fishing vessels, ships and also equipment related to marine renewable energy such as wind turbines, floating turbines, tidal turbines or wave power systems. The research teams at Centrale Nantes are on hand for companies and manufacturers, supporting them in all project phases, from pre-design to full-scale testing. For this, the teams use four separate tanks including a towing tank (140m X 5m) and an ocean engineering wave tank (50m X 30m), modeling and simulation software, and the SEM-REV offshore test site.

Website : https://lheea.ec-nantes.fr/test-facilities/

EMC2 / Advanced manufacturing technologies cluster

EMC2 is the French industrial cluster dedicated to advanced manufacturing technologies.

It has 400 members who come together to work on R&D projects for advanced manufacturing. Its overall aim is to create the right environment for fostering innovation and industrial competitiveness. The cluster works in a range of fields including offshore wind & marine renewables. For more than 10 years, it has encouraged, supported and accredited over 140 collaborative R&D projects–worth over €700m including €200m of public investment–relating to offshore wind & marine renewable energy.

The projects deal with advanced manufacturing technologies, metallic and composite materials, predictive maintenance, SHM, functional materials, assembly and energy efficiency.

Website : www.pole-emc2.fr/the-emc2-competitiveness-cluster

Pôle Mer Bretagne Atlantique / Sea Innovation Cluster

The cluster’s role is to support industry and academia in developing a French offshore wind and marine renewables sector. It does this by:

- developing innovative second-generation technologies to bring down production costs
- leveraging the capabilities of France’s energy and offshore sector to expand operations for harnessing natural resources
- helping organize the offshore wind and marine renewables sector (skills development, working groups, expertise…) in the region, nationally and even at European level.

Website : www.pole-mer-bretagne-atlantique.com
S2E2 / Smart Electricity Cluster

S2E2 is a cluster that encourages the emergence of innovative technological solutions, products and services related to offshore wind, marine renewable energies, storage particularly via hydrogen, energy efficiency and smart grids. It promotes and organizes collaboration between the business world and university laboratories through market-oriented innovation projects. The cluster has over 240 members.

Website: www.s2e2.fr/en

SEM-REV / Offshore Multi-Technology Test Site (Centrale Nantes & CNRS)

SEM-REV is the first European site for multi-technology offshore testing that is connected to the grid. It has all the equipment - offshore and on land - to develop, test and improve energy recovery systems.

The onshore and offshore facilities can be used to develop, validate and optimize offshore wave and wind power devices. The site can cater for complete units or sub-units and is managed by a team of engineers who help manufacturers to test new technologies. One of the first pieces of technology to be tested at SEM-REV is the Floatgen floating wind turbine (BW Ideol, Bouygues Travaux Publics, Centrale Nantes), which is France's first offshore turbine.

Website: www.sem-rev.ec-nantes.fr/english-version

Technocampus Ocean / Mutualized Technological Research Platform

Technocampus Ocean's activities are as follows:

- bringing together in a single place academic and industrial research teams who develop pioneering technologies for metal structures and manufacturing in the shipbuilding and offshore wind and marine renewbales sectors
- offers shared facilities (state-of-the-art equipment, staff and ancillary services) and caters for projects at various stages of maturity, from fundamental research to prototyping
- fosters knowledge sharing and encourages new collaborative R&D projects between academia and industry.

Website: www.technocampus.fr/en

University of Nantes

University of Nantes (UoN) is a multidisciplinary higher education institution which actively contributes to the socioeconomic development of the territories as an innovative force through its researchers, its technological platforms and its students.

University of Nantes is leading the Sea and Littoral Research institute (cluster with 850 permanent and contract research staff, 6 research centres or Universities), is one of the founding partners of WEst Atlantic Marine Energy Community and is one of the founding shareholder of France Energies Marines. 10 laboratories of UN (+80° researchers) are involved in Marine Renewable Energies. Their key forces are human sciences (maritime law, blue economy, spatial planning, risk assessment) and engineering (reliability assessment, degradation of materials, monitoring, numerical modelling including maintenance modelling and digital twins, biofouling). GeM-UTec platforms is a unique utility in France for testing materials and sensors in various maritime conditions including offshore (UN@SEA test site).

Website: https://english.univ-nantes.fr
WEAMEC / West Atlantic Marine Energy Community

WEAMEC (for WEst Atlantic Marine Energy Community) federates the vibrant Marine Renewable Energy (MRE) ecosystem of “Pays de la Loire” French Region, in the fields of Research, Innovation & Training.

WEAMEC (WEst Atlantic Marine Energy Community) combines more than 30 institutes and labs with major players such as Centrale Nantes, Nantes University, Jules Verne Research Institute, CEA Tech, or Université Gustave Eiffel for example. The WEAMEC ecosystem is further boosted by the involvement of more than 90 companies in MRE challenges with major players in ship building (Chantiers de l’Atlantique...), energy providers (EDF, ENGIE), turbine and integrated MRE device developers and manufacturers (GE) or major component manufacturers (ROLLIX which exports gears worldwide), and a lot of small and medium firms mainly federated in NEOPOLIA MRE cluster...

WEAMEC was founded by Centrale Nantes and its main partners: Nantes University, the PMBA cluster, and the Jules Verne Institute of Research and Technology. It also benefits from the support of the Regional Council of the Pays de la Loire, the ERDF (European Regional Development Fund), Nantes Métropole, and the CARENE (Saint-Nazaire and Estuary Regional Urban Community).

Website: www.weamec.fr/en

Nantes Saint-Nazaire Port

LOGISTICS AND SUPPLY CHAIN

Nantes Saint-Nazaire Port, leading port in France for MRE, with suited infrastructures and services:

- 15’ quays bearing capacity per m²
- Equipment permitting the handling of voluminous components
- Road accesses adapted to handle XXL cargo consignments
- 12 hectare logistics hub in Saint-Nazaire for the pre-assembly of offshore wind turbines
- 30 hectare centre in Montoir for industrial and logistical operations with real estate reserves
- 1 developed site dedicated to accommodate Environmental technology and renewable energy activities
- Port professionals who are well-versed in MRE logistics
- An industrial area filly dedicated to the offshore floating wind turbine assembly (in development)

Website: www.nantes.port.fr/en

PASCA / Logistics, Procurement & Supply Chain

LOGISTICS AND SUPPLY CHAIN

PASCA is the regional cluster dedicated to logistics, procurement & supply chain.

The cluster’s aim is to:
- help businesses be more competitive by leveraging procurement and logistics
- act as an enabler of supply chain optimization

PASCA fosters and develops industrial projects relating to supply chains. It sets up direct contact between research and industry as a way to enhance the sector. Services include logistics simulation and help with locating to the Pays de la Loire region: infrastructure and internal supply chain optimization, both up- and downstream.

Website: https://pasca.fr