

EU OFFSHORE RENEWABLES ENERGY STRATEGY

SEA EUROPE POSITION PAPER

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EXECUTIVE SUMMARY

- SEA Europe **welcomes** the **EU Offshore Renewables (“OREs”) Strategy¹** and calls on the EU to fully recognise and support the **key role of Europe’s shipyards, maritime equipment and services suppliers** (hereafter “maritime technology companies”) in making this initiative a success.
- **European maritime technology companies hold unique capabilities** to drive the green revolution in OREs production and have the necessary know-how and engineering power to develop the most innovative technological solutions in line with the EU policy goals and ambitions. In this regard, SEA Europe looks forward to joining the future “*dedicated EU Platform on offshore renewables*”, proposed in the EU OREs Strategy, and to actively engaging in this forum.
- The development of OREs, in line with the “European Green Deal” and “Blue Growth” ambitions, can offer **multiple benefits**: a diversification opportunity for several EU maritime technology companies; an opportunity for a re-industrialization of the EU; an opportunity to develop new technologies and products driven by the green goals, increasing the competitiveness of the European (maritime) industrial system; a stimulus to the recovery of demand from the internal market and an opportunity for re-skill and up-skill of human resources.
- Several European maritime technology companies are already involved in the development of offshore renewables projects and the stimulus offered by the internal market can translate into the development of capabilities that may also lead to further potential export opportunities with **spill-over benefits at local and regional level in Europe**.
- The effective attainment of the above benefits and goals is, however, strongly dependent on the existence of **smart, robust framework conditions in Europe that can forcefully stimulate EU added value investment and promote EU’s maritime manufacturing excellence and leadership**.
- In this regard, Europe needs, first of all, a **holistic policy approach** inclusive of industry operators, manufacturers, suppliers, financial institutions, research centres and academies. This is vital for the EU to deliver on the massive energy growth and neutrality targets by 2030 and 2050 and obtain maximum benefits in terms of value and employment from the development of this sector.
- Above all, Europe needs to support a **sectorial strategic autonomy policy** aimed at consolidating a resilient supply chain that would contribute to the development of technological sovereignty in OREs projects (e.g. wind parks), making sure that a significant part of the full life-cycle costs of a project **originate within Europe**, incorporating vertically design, solutions and products.
- In this context, **boosting innovation and technological development, facilitating access to finance** for risk-intensive investments in (European) maritime hardware (ships, equipment, technologies) for OREs projects, and **safeguarding level playing field and access to export markets** will be key to enhance Europe’s maritime technology industry competitiveness.

¹ [An “EU Strategy to harness the potential of offshore renewable energy for a climate neutral future” COM\(2020\) 741 final](#)

1. INTRODUCTION

SEA Europe² welcomes the EU “Offshore Renewables (OREs) Strategy³” (hereafter the “Strategy”) and calls on the EU to fully recognise and support the **key role of Europe’s shipyards, maritime equipment manufacturers and service suppliers** (hereafter referred to as Europe’s “maritime technology” companies) for making this initiative a success. The present paper sets out the views of the European maritime technology sector, which SEA Europe represents, to drive the Strategy’s implementation and ensure the necessary framework conditions and supporting tools to preserve **Europe’s OREs strategic autonomy and technology sovereignty** as well as its **maritime manufacturing excellence** and **global industrial leadership**.

2. EUROPE’S MARITIME TECHNOLOGY IS INSTRUMENTAL TO THE EU OREs STRATEGY’S SUCCESS

The “**maritime technology sector**” in Europe encompasses the building, maintenance, repair, retrofitting and conversion of all types of ships and floating structures including the full supply chain with the various producers of maritime systems, equipment material, technologies, and services. Europe’s maritime technology industry is world leader in the design and construction of complex, high-tech and specialised ship types and is furthermore leading in the development and manufacturing of highly sophisticated marine equipment and maritime technologies for the shipbuilding and offshore industries worldwide.

With regard to the OREs sector, Europe’s shipyards, equipment manufacturers and service suppliers :

- design, build, repair, maintain and decommission sophisticated ships, maritime structures and platforms (e.g. offshore wind foundation / turbines installation vessels, walk to work vessels, service operation vessels, maintenance vessels, cable laying vessels, wind farms and substations);
- supply advanced maritime equipment, systems, and technologies, such as cranes, cables, piling equipment, new tidal turbines, devices for grid connection, etc.;
- are involved in the development of ORE projects from delivering consultancy and engineering services in relation to specific projects, including project quality assurance, to various types of equipment to be installed or set-up at e.g. offshore wind farm structures such as life-saving and firefighting equipment.

European shipyards, equipment manufacturers and service suppliers hold unique capabilities to drive the green revolution in OREs production and have the necessary know-how and engineering power to develop the most innovative technological solutions in line with the EU policy goals and ambitions.

In this regard, SEA Europe looks forward to joining the proposed “dedicated EU platform on offshore renewables” and stands ready to actively engage and contribute to the activities of this forum.

3. THE OPPORTUNITIES STEMMING FROM THE FURTHER DEVELOPMENT OF OREs IN EUROPE

The development of OREs, in line with the “European Green Deal” and the EU’s “Blue Growth” ambitions, can offer multiple benefits: a diversification opportunity for several EU maritime technology companies; an opportunity for a re-industrialization of the EU and to develop new technologies and products driven by the green goals, increasing the competitiveness of the industrial system; a stimulus to the recovery of demand from the internal market and an opportunity for re-skill and upskill of human resources.

OREs have the realistic potential to represent between 10 and 30% of the EU electricity mix by 2030 and 2050 as well as contribute to the “green” development of nearly all maritime activities, at harbours (e.g. ship bunkering via use of hydrogen or other fuels issued from renewable electricity) and in the wider

² SEA Europe represents close to 100% of the maritime technology industry in 16 nations, including EU Member States, Norway and Turkey. For more information, see the SEA Europe website <https://www.seaeurope.eu/>

³ “EU Strategy to harness the potential of offshore renewable energy for a climate neutral future” COM(2020) 741 final.

context of “Blue Growth”, enhancing also local and circular economy. By way of example, bunkering ships with a wide range of alternative fuels of which energy sources are coming directly from offshore wind farms would drastically limit long-range transportation of energy.

In this context, the **advanced and innovative capabilities of European maritime technology companies will be key “enablers” of the necessary integration of OREs across transversal maritime economy activities**, for instance ship-bunkering, harbour circular economies, blue growth activities (aquaculture), transshipment-hubs, energy storage, etc, generating a virtuous circle of lasting benefits. Furthermore, European maritime equipment manufacturers will be key players for the use of new fuels derived from ORE (hydrogen, biofuels, e-fuels, electricity,...) onboard ships which are highly contributing to the decarbonisation of the fleet.

The expected demand in vessels, structures and equipment required for OREs applications represents a great opportunity not only for European maritime technology companies, but also for the **local/regional industrial value chains, clusters and ecosystems benefitting from and relying on European maritime manufacturing activities in their territories**⁴.

EXAMPLE: OFFSHORE WIND MARKET AND THE OPPORTUNITIES FOR THE EUROPEAN MARITIME TECHNOLOGY SECTOR

Offshore wind energy currently makes up only 2% of Europe’s electricity mix. Yet, it is growing rapidly thanks to decreasing costs and improving technology. Developing and operating offshore wind farms requires highly specialised vessels, such as wind foundation / turbines installation vessels, walk to work vessels, service operation vessels, maintenance vessels, cable laying vessels, heavy-lift vessels and crew transfer vessels to transfer the technicians between the shore base and the farm.

Over 100 vessels are currently used in Europe for the installation of offshore wind farms and laying cables, and already more than 500 others are used for maintenance and transport of staff. However, as recognised in the EU OREs Strategy, many more vessels will be needed for future installations. The average annual growth rate for new offshore wind installations in the next decade is expected to be above 15% in Europe, and a tripling of capacity between 2020 and 2030 is expected⁵.

Development of offshore projects further from shore with increased turbine capacities will be a key trend. Greater distance from shore normally leads to deeper waters, where new foundation solutions are required. This will also have an impact on vessel size, requirements and capacities. As a large number of vessels are too small to handle operations in deeper waters, a growing number of both new installation vessels and support or service operation vessels (SOV) will be required by the offshore wind industry. More specifically there will be a demand for a wide range of vessel types depending on the project phase: development, installation, operation or maintenance.

Offshore wind activity, especially in an installation phase, will therefore have an impact on demand for several vessel types normally active in other markets, e.g. dredgers, stone-dumping, trenching, heavy-lift, cable-laying and survey vessels and ROV Support. And there will furthermore be demand for more consultancy and engineering services from ship design companies and equipment from marine equipment manufacturers.

Yet, the extent to which the development of OREs will be able to benefit the wider European economy and society and preserve its strategic European maritime technology industrial basis will crucially depend on the existence of **smart, robust framework conditions in Europe that can stimulate EU added value**

⁴ Shipyards and firms manufacturing maritime equipment make indeed a significant contribution to the economic development of the regions where they are located, and across the entire supply chain, which is particularly important to SMEs. The regions with a shipbuilding industry usually have a whole cluster of equipment, technology and service suppliers. On top of that, several studies say that for each direct employee of a shipyard there are another 6 indirect jobs created in the region. This consolidated industry network is very important for the economic development and employment in the regions as well as for fostering the local expertise, capabilities and knowledge that enable the development of a wide range emerging blue activities.

⁵ Source: SEA Europe Market Forecast 2019 report

investment and promote EU's maritime manufacturing excellence. Thereby, the main EU Policies, e.g. the European Green Deal and the ORE Strategy, would not only focus on delivering solutions for societal challenges, but could serve as a stimulating tool for enhancing or increasing the competitiveness of European companies, including companies within the European maritime technology industry.

4. SEA EUROPE'S POLICY RECOMMENDATIONS FOR THE EU OREs STRATEGY'S IMPLEMENTATION

First of all, Europe needs a **holistic policy approach inclusive of industry operators, manufacturers, suppliers, financial institutions, research centres and academies.** This is vital in order for Europe to deliver on the massive energy growth and neutrality targets by 2030 and 2050 and to obtain the maximum benefits in terms of value and employment from the development of this sector.

In this regard, SEA Europe calls on the EU to start a **regular and comprehensive dialogue** with all involved stakeholders contributing to fulfilling the ORE's Strategy goals, and supports the proposed "*dedicated EU platform on offshore renewables*" which, as mentioned, it looks forward to joining.

Secondly, Europe needs to support a **sectorial strategic autonomy policy** aimed at consolidating a resilient supply chain that would contribute to the development of technological sovereignty in ORE projects (such as wind parks), making sure that a significant part of the full life-cycle costs of a project **originates within Europe**, incorporating vertically design, solutions and products. For the European maritime technology industry this will in particular mean that the highly specialised vessels involved in ORE projects and the marine equipment and technologies installed onboard these vessels should be European. Service and maintenance of these vessels should also be carried out at European yards.

Now is the time to ensure that the EU OREs ambition will benefit Europe and its maritime technological and industrial basis. **In this regard, SEA Europe considers the following actions of utmost importance** in the context of the ORE Strategy's implementation:

a. Boosting support for Research, Development & Innovation investment

New emerging markets for the European maritime technology industry such as offshore renewable energy come with challenges that need to be addressed with significant RD&I investments. In this respect, significant growth potential could be realised through **effective RD&I policies.**

Even though European maritime technology companies today hold a strong position both in building highly specialised vessels for the OREs sectors and in supplying all the equipment and technologies needed, the speed of development of offshore renewable projects will require new vessel capabilities in order to meet these requirements. Many of these companies are furthermore involved in offshore renewable energy infrastructure projects aimed at supplying power for electricity propelled vessels or vessels which will be using alternative fuels such as hydrogen and methanol.

In this regard SEA Europe appreciates that under **Horizon Europe** it will be possible to support the development and testing of new and innovative offshore renewable energy technologies, components and solutions. **The Innovation Fund (linked to the EU-ETS)** should be, equally, fully utilised to support the demonstration of European innovative clean technologies at commercial scale, such as ocean energy, new floating offshore wind technologies or projects to couple offshore wind parks with hydrogen production or battery storage.

In SEA Europe's view:

- In the short and medium-term, RD&I investments will be particularly needed to **enhance the technologies and devices for the production, storage and distribution of energy and for the integration of different forms of renewable energy (wind-tidal-wave, solar) as well as for the methodologies for the choice of installation sites**, taking into account the mitigation of the impacts of the OREs-related structures on the marine environment. In the short term, new designs of OREs-related ships, platforms and plants, including the reduction of the impact on the marine environment of the future decommissioning of OREs installations will be needed. In the medium

term, fostering rapid innovation of the storage systems will be key towards greater energy system integration of renewable energies.

- To support the sector in developing and achieving robust, flexible and resilient OREs-related platforms and plants, **advanced computational methods are necessary to assist in the design, assessment, and optimisation of the single energy device as well as of the plants.**
- Furthermore, **the integration of those methods with extensive use of sensors (and tools for digital transition (e.g., predictive analysis, artificial intelligence, and everywhere computing))** will be key to the development of digital twins for the single devices and plants to be used both in design and operating conditions. Advanced materials coupled with marine robotics for devices/plants inspection and maintenance will also contribute to enhancing the operative devices/plants life.

b. Enhancing Access to Financing for European projects

As capital costs make up a significant share of total investment costs for new offshore projects, mitigating risk and reducing the cost of capital can indeed have an important positive effect for mobilising private capital and incentivising new investment, as recognised in the EU OREs Strategy. SEA Europe agrees that **“all existing tools should be mobilised and boosted to facilitate access to finance”** for European projects, including higher risk investments that can **develop, preserve and advance EU OREs industry, including its maritime manufacturing and technological dimension.** By way of example:

- **Lending by the European Investment Bank (EIB)** should play a more significant role in offshore renewable energy and include better and more direct support to European maritime technology companies and their projects.
- The **Connecting Europe Facility (CEF)**, with its new facility for “cross-border renewables generation”, should be fully utilised to fund European ORE maritime technology projects between two or more EU Member States (e.g. joint development of a floating wind farm to support European technology leadership) and to concretely benefit European maritime technology producers.
- Equally, the **EU’s “Renewable energy financing mechanism” (REFM)**, operational since 1 January 2021, should be fully deployed to provide support for a wide range of maritime technology projects in Europe, from small-scale installations and innovative technologies (such as floating offshore wind parks) to large-scale, cross-border and hybrid projects.

At the same time, a **regulatory framework able to foster an adequate financing ecosystem in Europe is crucial for European maritime technology companies to compete globally.**

In Europe there are different financing resources and tools available, but they are not fully fit for purpose to support the European maritime technology industry in participating in the OREs sector. Many European operators would rather build their vessels in Europe due to the anticipated higher residual value and quality as well as for future maintenance/repair activities. Despite these advantages of building in Europe, many ORE-related vessels are however built in Asia because the costs of building in Europe do not fit in the operators’ business model *inter alia* due to the more stringent financing schemes in Europe.

For example: in contrast to some of their non-EU competitors, EU shipyards are bound to the OECD disciplines on Export Credits and by various more stringent regulations and standards. This means that European-built vessels are more expensive and need to be repaid in a shorter period. A European-built cable laying vessel, for instance, would not fit in many operators’ business cash flows while the anticipated residual value would be higher. As a result, operators are pushed to Asian shipyards and, as a consequence, offshore wind parks in Europe are currently largely filled with Chinese-built vessels.

In concrete terms, SEA Europe would like to offer the following recommendations:

- **Financing schemes in Europe should better incorporate the economic lifetime of the vessel, in essence, a longer repayment profile is required.**
- **Subsidized offshore wind parks should require European social, financial and environmental standards throughout their value chain, on top of existing international standards (OECD, ILO**

etc). This will avoid that European offshore wind parks are built by means of assets built below Europe's social, financial and environmental norms.

- Finally, the **EU Taxonomy**, aimed at channelling investment into sustainable activities in line with the European Green Deal objectives, should support industries applying the best EU-standards, taking into account a **full-life-cycle approach of environmental costs/benefits**.

c. Ensuring level playing field and access to export markets

SEA Europe fully agrees with the EU ORE Strategy's recommendations that **'as a technology developer, the EU must take a more resolute approach to promoting its interests through trade policy'** and that Europe **"should more actively promote EU standards at bilateral and international level, which includes active engagement in international standard-setting bodies"**, as also stated in the Strategy.

Level playing field, undistorted trade and reciprocal market access are existential for the European maritime technology industry to compete and be able to survive globally, not least in the "niche" OREs market segment. In this regard, SEA Europe would like to make the following recommendations:

- The EU must forcefully defend its EU maritime technology companies from rising unfair competition in shipbuilding, e.g. predatory (low) prices from non-EU competitors fuelled by foreign subsidies⁶. In recent years, some SEA Europe member companies have reported losing several big ORE contracts to Chinese competitors offering very low prices (often up to 40% lower than those offered by European companies).
- The EU must closely monitor third country state support measures and strategy plans in support of domestic OREs and supply chain industries and take the necessary counter-action where needed. In particular, State-funded companies in Asia are massively investing in OREs, with strong financial support and in pursuit of government geo-economic and geopolitical strategies⁷, while local content measures and policies are in place in various third countries in the world (e.g. US, China) and, recently, have been announced even in the UK⁸.
- The EU must be vigilant in defending the industry's export interests by raising trade barrier concerns of the industry in multilateral context as well as bilaterally with EU's trading partners. This is key in order to safeguard the "offensive" (export) interests of EU maritime technology companies in accessing foreign (OREs) markets.

SEA Europe trusts the above comments will be taken duly into account in the EU OREs Strategy implementation and remains available to provide any further clarification that may be required.

Contact information

SEA Europe asbl
Rue de la Loi 67 (4th floor)
1000 Brussels - Belgium
tel. +32 2 230 27 91
info@seaeurope.eu

⁶ For more information on the trade challenges faced by the European maritime technology sector, SEA Europe wishes to refer to its position paper and trade policy recommendations submitted in the context of the **EU Trade Policy Review** consultation in November 2020 (available [here](#))

⁷ For example, China's state-owned giant "China State Shipbuilding Corp" recently kicked off the construction of a Yuan12.9bn (**\$ 2bn**) manufacturing base that aims to cater to the growing demand for offshore wind power: "Occupying a 176-hectare area in Qin Zhou, a major port city in China's Guangxi Province, the facilities will boast a capacity to manufacture and install 1,500 megawatts of offshore wind farms each year", the Chinese State conglomerate said in a press release (Source: [CSSC to boost capacity for offshore wind](#), Lloyds List 30.11.20). Once construction is completed, due in 2022, the new facilities are mainly set to manufacture offshore wind turbine jackets, offshore production and platform modules and other subsea equipment, according to a report issued by CLARKSONS in December 2020.

⁸ The UK Government recently announced several support measures (including a GBP 160 million fund) to boost the offshore wind sector, including local content requirements to support UK manufacturers in government-backed renewables projects. See here: "UK faces tough pricing choices to fill offshore wind supply gaps", Reuters, 09 December 2020 (<https://www.reutersevents.com/renewables/wind/uk-faces-tough-pricing-choices-fill-offshore-wind-supply-gaps>).