

【欧州】 【海事】

Maritime Issues - Renewable energy including offshore wind power: The European Commission presents communication on new sustainable blue economy

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【概要 : Summary】

The EU's blue economy includes all industries and sectors related to oceans, seas, and coasts, independently on whether they are directly located in the marine environment, like shipping, seafood, and energy generation, like wind power generation, or on land, like ports, shipyards, and coastal infrastructures.

Since the European Green Deal calls for a 90% reduction in GHG emissions from all modes of transport by 2050 to achieve the net-zero carbon emission target, this also includes maritime transport. Although it generates comparatively fewer GHG emissions than road or air transport, the maritime transport still emits significant amounts of both, CO₂, and other polluting emissions due to the great volumes and the still heavy reliance on fossil fuels. Therefore, decarbonising the maritime transport sector and fishing operations will be a necessary part of the efforts to reduce GHG emissions in the transport sector.

Furthermore, the marine renewable energy and its offshore wind farms for power generation within the EU's blue economy is of increasing interest since the EU intends to produce up to 35% of its electricity from offshore sources by 2050.

The EU's blue economy could help achieving the European Green Deal's goals and to reach the Recovery Plan's target to boost the green and digital transition.

Therefore, on 17 May 2021, the European Commission published its Communication (COM (2021) 240 final), which sets out a detailed and realistic agenda for a sustainable blue economy that integrates ocean policy into Europe's new economic policy to play a major role to achieve the European Green Deal's objectives.

The purpose of the Communication is to lay a foundation for future initiatives to achieve the transformation towards a sustainable blue economy in the EU, as one more steppingstone to reach net-zero carbon neutrality by the year 2050.

【記事 : Article】

1. The EU's blue economy and the European Green Deal

The EU's blue economy includes all industries and sectors related to oceans, seas, and coasts, independently on whether they are based directly in the marine environment, like shipping, seafood, and energy generation, like wind power generation, or on land like ports, shipyards, and coastal infrastructures. The EU supports the blue economy through various instruments, including the

European Fund for Strategic Investments, which has invested over €1.4 billion in offshore wind projects and offered also support to other parts of the blue economy.

Regarding the environmental dimension of the blue economy, shipping is the most carbon-efficient mode of transportation, but the size and global nature of maritime shipping makes it necessary for the industry to reduce its environmental impact. Maritime transport and other sectors in the EU's blue economy have to reduce their CO2 emissions to take part in the emission reduction efforts in the transport sector and to achieve a 90% reduction of GHG emissions by the year 2050, envisaged in the European Green Deal (COM(2019) 640 final) with its objective to achieving a climate-neutral EU by 2050. Therefore, also decarbonising maritime transport and fishing operations will be an indispensable part in the efforts to reduce GHG emissions in the transport sector. In particular, the marine renewable energy with offshore wind farms for power generation is of increasing interest since the EU intends to produce up to 35% of its electricity from offshore sources by 2050. The marine renewable energy had suffered the initial impact of the COVID-19 pandemic but is expected to promptly recover from the impacts as it has a huge potential in terms of its contribution to a green recovery.

2. The EU Blue Economy Report 2020 and the offshore wind power generation in the Marine Renewable Energy (MRE) sector

The European Commission's EU Blue Economy Report 2020, which was prepared by the Directorate-General Maritime Affairs and Fisheries in cooperation with the EU's Joint Research Centre and published on 11 June 2020, included an analysis of the development of marine-based or marine-related economic sectors, defined as part of the EU's Blue Economy. They include marine living resources, marine non-living resources,

marine renewable energy, port activities, shipbuilding and repair, maritime transport, and coastal tourism. The EU Blue Economy Report 2020 pointed out the latest development in the Marine Renewable Energy (MRE) sector and the power generation of offshore wind farms. It also underlined the deployment possibilities of floating wind farms, allowing the wind power generation in deep-water areas. The report is considered to support relevant initiatives and policies under the new European Green Deal and provides reliable data to make policy decisions. The Marine Renewable energy (production and transmission) sector is growing exponentially, while still encountering challenges as wind energy production on land continues to be cheaper, which makes it difficult for offshore farms to compete. Furthermore, the lack of electrical connections of cables and grids is still a substantial barrier for offshore wind farms, which add to investment costs.

Regarding the Marine Renewable Energy (MRE) sector, it includes all renewable energy sources generated at sea, which could make a significant contribution to the EU's 2050 energy strategy. Most of the promising ocean technologies are still at the research and development stage and not yet commercially available, including wave energy, tidal energy, salinity gradient energy and ocean thermal energy conversion (OTEC). Currently, the Marine renewable energy sector only comprises of offshore wind farms. In 2018, the EU was the world leader in offshore wind energy, with a total of installed offshore wind power generation capacity of 22.1 GW from 5,047 grid-connected wind turbines across 12 countries. In 2019 alone, 502 new offshore wind turbines were connected to the grid across 10 projects, bringing 3.6 GW of new (gross) additional capacity, according to the Blue Economy Report 2020. Offshore wind turbines continue to get more powerful and on average, turbine capacity has increased by 16% every year since 2014.

The European Commission's European Green Deal underlines that "…increasing offshore wind production will be essential, building on regional cooperation between Member States". The wind energy development is focused mainly on the North Sea, and the main EU producers of offshore wind energy are the UK, Germany, Denmark, the Netherlands, and Belgium. To fully exploit the potential of offshore wind, the commercialisation of floating wind technology will make more sites suitable for the installation of wind farms, also in deeper waters of more than 60 metres. It is expected to open the market for offshore wind in the deep sea of the Atlantic and Mediterranean Sea. The utilisation of floating offshore wind farms would allow an expansion of up to 80% of offshore wind resources in deep water areas, which cannot be utilised by conventional bottom fixed structures. According to the European Commission's long-term Strategic Vision, offshore wind capacity can be expected to increase to 240-440 GW capacity by 2050.

3. The European Commission's Communication on a new approach for a sustainable blue economy in the EU

While the European Green Deal calls for a transformation of the EU economy to become a modern, resource-efficient, and competitive economy, the NextGeneration EU Recovery Plan for Europe should boost the green and digital transitions and make Europe's economy more resilient and more sustainable for future generations.

Europe's blue economy has already taken significant steps to modernise and diversify. Alongside traditional sectors, innovative sectors are evolving and growing, such as ocean renewable energy. Considering the European Green Deal's goal to achieve net-zero climate neutrality by 2050, also the blue economy must take measures as it has a wide impact on the marine environment, which ranges from visible pollution, underwater

noise, chemicals, and nutrients to the effects of climate change and GHG emissions and other negative impacts, triggering changes in water temperature, acidification, rising sea levels and intense flooding and erosion, biodiversity loss, and others.

Therefore, on 17 May 2021, the European Commission published its Communication COM (2021) 240 final "…on a new approach for a sustainable blue economy in the EU. Transforming the EU's Blue Economy for a Sustainable Future".

This Communication supports the idea to integrate ocean policy into Europe's new economic policy and sets out a detailed and realistic agenda for the blue economy to play a major role to achieve the European Green Deal's objectives. The focus needs to be shifted from "blue growth" to a sustainable blue economy. Many of the current activities need to reduce their carbon footprint, while new, carbon-neutral activities will get into the focus of attention. The purpose of the Communication "…is to lay a foundation on which to build the initiatives of the next few years, including initiatives that are not yet planned". The Communication envisages the blue economy's contribution to climate change mitigation by developing offshore renewable energy, decarbonizing maritime transport and greening ports. To speed up the expansion of offshore renewable energy, the EU offshore renewable energy strategy (COM (2020) 741) aims to multiply five-fold the capacity for offshore renewable energy by 2030 and 30-fold by 2050. A sustainable ocean energy mix including floating wind, thermal, wave and tidal energy could generate a quarter of the EU's electricity in 2050. The thermal, wave and tidal energy-emerging technologies are expected to reach commercialisation within the next ten years.

Regarding the decarbonisation of maritime transport, the Commission plans a set of measures, including the possible extension of the EU-ETS to maritime transport and aligning the taxation of

energy products with EU energy and climate policies when revising the Energy Taxation Directive.

Furthermore, the blue economy needs to become more circular by renewing the standards for fishing gear design, for ship recycling and for the decommissioning of offshore platforms. Regarding the recycling of large ships, the Commission intends to revise the Ship Recycling Regulation (EU) No 1257/2013, (Regulation (EU) No 1257/2013 of the European Parliament and of the Council of 20 November 2013 on ship recycling and amending Regulation (EC) No 1013/2006 and Directive 2009/16/EC), by 2023 and to possibly extend its scope and reinforce the existing regime. Developing green infrastructure in coastal areas will help preserve biodiversity and landscapes, while benefitting tourism and the coastal economy. The transition to a sustainable blue economy will also need to increase resilience, in particular in the maritime and coastal tourism sector, which accounts for 60% of the employment in the blue economy and has suffered severe effects from the COVID-19 pandemic.

According to the Communication, the new Blue Forum for users of the sea to coordinate a dialogue between offshore operators, stakeholders and scientists engaged in fisheries, aquaculture, shipping, tourism, renewable energy, and other activities will stimulate cooperative exchange for the sustainable use of marine environment.

Following the Covid-19 outbreak, the Communication has adopted a series of initiatives to re-enable safe tourism and pave the way for a more resilient and sustainable sector. The Commission is also preparing a guide on the many funding opportunities available.

Regarding the financing of the sustainable blue economy, the European Commission, and the European Investment Bank Group, composed of the European Investment Bank and the European Investment Fund (EIF) will increase their

cooperation and work jointly with Member States to meet existing financing needs to reduce pollution in European seas and support investment for blue innovation and blue bioeconomy. Furthermore, EU Member States and coastal regions should make use of the different tools and funds at their disposal to support the transition towards the sustainable blue economy.

The Commission will work with the European Parliament, the Council and other EU Institutions, where appropriate, to implement the tabled agenda and the measures. The European Commission will be working closely with the Member States, regions, and will reach out to all maritime stakeholders to engage with them in shaping a sustainable blue economy. Thereby, Europe can move “as one” towards sustainability and to endorse the principles of the European Green Deal.

The Commission will also continue creating the conditions for a sustainable blue economy internationally following the international ocean governance agenda. The Commission plans to introduce more emission control areas in EU waters and designate new areas in the Mediterranean Sea and starting similar work in the Black Sea. Thereby it is planned to achieve a reduction of air emissions of SO₂ and NO_x from international shipping by up to 80% and 20% respectively within ten years.

4. The intended impact of Communication COM (2021) 240 final towards a sustainable blue economy

The new Sustainable Blue Economy Communication COM (2021) 240 final puts forward the Commission’s proposals for a sustainable maritime policy for this decade, to make the transition envisioned in the European Green Deal a reality in all blue economy sectors, including fisheries, aquaculture, coastal tourism, maritime transport, port activities and shipbuilding. All those sectors will have to reduce their environmental and climate impact. Therefore, the

Communication calls on all maritime players to base their activities on the responsible use of natural resources, on decarbonisation and on circular economy concepts.

To achieve the objectives of climate neutrality and zero pollution, the offshore renewable energy plays a central role and needs to be focused on, as it can utilise the unlimited energy of the oceans without additional GHG emissions in the production process of electricity. Therefore, the offshore renewable energy will be a cornerstone of the EU's clean energy transition.

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