ORESkills Vision Paper: The position of the ORE Large Scale Partnership of the Pact for Skills

The challenge

Offshore Renewable Energy (ORE) constitutes a clean and abundant source of energy. It is expected that it will contribute to reducing greenhouse gas emissions and also diminishing damage to the environment, in comparison to traditional fossil-based energy. For the purpose of the Pact for Skills, the main forms of offshore renewable energy systems are categorized into two main groups, according to the maturity of the technology employed.[1] Fixed offshore wind is the most mature sub-sector, whilst wave, floating offshore Wind and tidal are progressing fast with tidal closest to commercial exploitation, and offshore solar is experiencing a rapid development. Furthermore, other ocean energy sources are emerging, such as ocean thermal energy conversion (OTEC) and salinity gradient power, as part of efforts to harness the vast potential of ocean resources. **The EU has already set specific and ambitious targets for increasing offshore renewable energy production until 2050**[2], which will require a long-term plan through maritime spatial planning, and the scale-up of the whole value chain to deliver a six-fold increase in the installation rate[3]. The ORE sector already has difficulties recruiting and training workers with the right skills[4]. The aging of the current workforce in shipbuilding, which is contributing to the manufacture of ORE devices, is adding pressure and urgency to the efforts to ensure replacement and avoid a loss of skills.

The demand for offshore structures, equipment, and zero-emission specialised vessels required for the wide variety of ORE applications represents a great opportunity for the industrial value chains, clusters and ecosystems.

Success in fulfilling these targets will largely depend on the availability of financial support for emerging technologies and a growing and well-qualified labour force, prepared to underpin the industrial growth through the uptake of new technologies and innovations. Thus, human capital investment is expected to have a leveraging effect on industrial performance.

[1] This categorisation and terms used to describe the technologies employed to extract energy from the oceans follow the lexis employed by the European Commission, Directorate-General for Maritime Affairs and Fisheries in *the EU Blue Economy Report 2023.* 2023.

[2] The EU Strategy to harness the potential of offshore renewable energy for a climate neutral future. COM/2020/741 final targets to upscale the present capacity to reach 60 GW of offshore wind and 1 GW of ocean energy by 2030, and 300 GW and 40 GW, respectively, by 2050. Member States agreed in 2023 to accelerate the installations in order to reach 111 GW of offshore wind energy by 2030. This could represent an increase of more than ten-fold in the present occupations.

[3] According to the EU Blue Economy Report 2023, the EU had at the end of 2022 a total installed offshore wind capacity of 17.5 GW across 11 Member States. In order to reach in 2030 the 111 GW committed by Member States, the EU must maintain an average installation rate of over 11,7 GW/year, which is a nearly ten fold increase in respect of the 1.2 GW installed in 2022.

[4] 17-32% of ORE companies are experiencing skills gaps, and in technical occupations, 9-30% are experiencing skills shortages. COM 668.Final

The Renewable Energy sector has shown resilience[5] to the COVID crisis, providing jobs with a lower risk of coronavirus-related exposure[6]. The energy crisis triggered by Russia's invasion of Ukraine in 2022 has highlighted the vulnerabilities associated with excessive dependence on external fossil fuel suppliers. This crisis has emphasized the critical role of wind and other renewable energy sources in ensuring the stability and security of energy systems. In response, new measures have been introduced to enhance the competitiveness of the wind industry.[7] The UK is the European country with the largest offshore wind energy installed capacity (45%)[8], and also is one of the most prominent targets for developing and installing floating wind, wave and tidal devices[9]. Building on the EU-UK Trade and Cooperation Agreement, since 2022, a Memorandum of Understanding has provided a framework for the development of cost-effective and sustainable offshore renewable energy[10].

The vision

By 2030 the ORE sector will have access to a sizable workforce proficiently trained and skilled. This workforce will be equipped to tackle sustainability challenges, embrace new technologies and innovations, and capitalize on growth opportunities. These efforts are expected to result in the creation of attractive job opportunities with fair working conditions, with all stakeholders actively engaged in maximising the the benefits derived from investments in skills development.

The ambition

Supporting the offshore renewable energy strategy by fostering a specialized training offer, aimed at enhancing the skills of the workforce through re-skilling and up-skilling initiatives. The training offer should provide diverse opportunities, including individual learning paths, and integration with complementary sectors. It should also ensure effective preparation for new personnel, facilitating talent attraction, and upholding robust labour standards, thereby contributing significantly to the advancement of the industry.

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[5] Despite the pandemic, 2020 was a record year for offshore wind financing in Europe with €26.3bn raised for the financing of new offshore wind farms, including €2.1bn in offshore transmission infrastructure. Europe installed a total 2.9 G of offshore wind power in 2020 in line with pre-covid forecast, a sign of the resilience of the sector. Offshore wind in Europe statistics 2020 (WindEurope, 2020)

[6] COV19R score by occupation group, EU-27 and UK. Pouliakas, K; Branka, J (2020). EU jobs at highest risk of Covid-19 social distancing: Is the pandemic exacerbating the labour market divide? Luxembourg: Publications Office of the European Union. Cedefop working paper; No 1. http://data.europa.eu/doi/10.2801/968483

[7] European WindPower Action Plan, COM (2023) 669 Final.

[8] CETMAR (2020). MATES project baseline for an Offshore Renewable Energy Skill Pact. Results of the MATES project (www.projectmates.eu). Source for the percentages: Wind Europe 2019, IRENA 2019, Directorate-General for Maritime Affairs and Fisheries 2019 and own calculations.

[9] In 2020, the UK Minister increased the Sector Deal target to 40 GW by 2030, including 1 GW of floating wind. The Sector Deal proposes other actions including a target to have at least 33% women in the wind industry sector by then. In 2021, UK government announces its biggest investment to reach the 12 GW of wave and tidal stream by 2050.

[10] The cooperation under the Memorandum of Understanding (MoU) implements Article 321 of the EU-UK Trade and Cooperation Agreement, which provides that the EU and the UK are to enable the creation of a specific forum for technical discussions on offshore renewable energy development, building on North Seas Energy Cooperation (NSEC), in a number of areas.

Ensuring health and safety skills for sea operations and maintenance at sea will be of the utmost importance, as well as reinforcing the specialization of managerial positions, the continuous updating of engineering and digital skills and the strengthening of transversal capacities for design, manufacturing and operation occupations. Taking a more multi-disciplinary and integrated approach to building skills will enable more suitability and flexibility of the workforce and ultimately better job security, contributing to promote the combination of multiple uses of ocean devices and a more integrated use of the space.

Engaging all relevant stakeholders, namely from the industry, ports, trade unions, education and training providers, but also research and public administrations in establishing a shared vision and action plan, and ensuring continuous adaptation to the changing needs and scenarios will be critical.

Optimising the efforts and maximizing value-generation through the use of existing resources and initiatives for bridging the skills' gaps in the ORE[11] will be key. The partnership under the Pact for Skills in the ORE sector will broaden the outcomes from previous initiatives building on them through inclusiveness and openness for all stakeholders, to jointly cooperate under one common European umbrella.

The proposal

- Partners have agreed on 29 Lines of action[12], and will promote collaborative actions to mobilise new investments to develop them.
- The overall strategy will be complemented with a Sea-Basin approach[13], to tailor actions according to varying capacity requirements across different geographic regions. The EU sea-basins[14] and macro-regional strategies[15] can support this adaptation process.
- Partners engage to underpin the skilling process for the new jobs expected in the sector, estimated to account for 124,000 new workers by 2030[16], and contribute to

[11] In particular, MATES Blueprint project will provide a baseline strategy, to be enriched with the outcomes of the USWE project, the EU Pact for sustainable Industry, WindHarmony, Encore-2, T-Shore Offshore For Sure and the projects willing to join forces in the pact. The FLORES project will support the ORESkills partnership activities from 2022 to 2024.

[12] Lines of action http://intranet.projectmates.eu/index.php/s/5FMBFfC6MRoS6AW

[13] In this context, the "Sea-Basin approach" pertains to the consideration of various sea basins in Europe, each characterized by its unique attributes that enable the development of different types of offshore renewable technologies. As a result, the ORE sector has different levels of maturity depending on the sea-basin, and customized strategies are essential to meet the specific needs of each area.

[14] https://oceans-and-fisheries.ec.europa.eu/ocean/sea-basins/eu-sea-basins_en

[15] https://ec.europa.eu/regional_policy/policy/cooperation/macro-regional-strategies_en

[16] According to WindEurope forecasts (2030 Wind energy job projections, October 2023), the EU offshore wind sector will support over 124,000 new jobs by 2030: EU and UK are expected to jointly account for 223,000 jobs (including direct and indirect), from which 19,000 are expected to be based in UK (WindEurope calculations); this implies a cumulative difference of 124,000 jobs in the EU for the period 2022 – 2030, representing an increase of 15,500 jobs per year as an average. According to ETIPOCEAN, the Ocean energy sector could generate between 200.000 and 500.000 jobs in 2050 (Industrial Roadmap for Ocean Energy, 2022).

improve up-skilling opportunities in the field of the actual ORE workforce[17]. The Pact for Skills will be implemented in the ORE with a bottom-up approach adapting to the different needs of Europe's sea basins. The governance of the partnership is stated in the following ToR[18].

- Partners will promote projects and initiatives to boost the skilling processes in the ORE, creating links among its members, and increasing the number of participants.[19]

The engagement and the Key Performance Indicators (KPI)

The partnership will ensure sustainable and systematic sectoral cooperation based on the engagement of all stakeholders involved.

The partnership will continue to address efforts to increase the number of relevant stakeholders supporting the Pact in each sea basin, to analyse the specific needs in each area, and stimulate public-private investments to launch the actions. The ORE skilling challenges and bottlenecks will be discussed in multi-stakeholder debates to promote collaborative solutions and to the extent that it is feasible, consensus approaches.

The commitment

In support of the objectives of the **European Year of Skills** and of the **European Pillar of Social Rights Action Plan**[20], the Offshore Renewable Energy Large-Scale Partnership of the Pact for Skills (ORESkills partnership in the P4S) supports the objective that by 2030, 60% of the ORE workforce will participate in upskilling or reskilling actions each year.

122.400 *workers participating in upskilling or reskilling actions annually by 2030.*

Milestones

In order to achieve this goal, the ORESkills LSP aims to have:

75.900 workers will participate in upskilling and reskilling actions during 2025. *This is estimated to mean* (60%) of the workforce.

94.500 workers will participate in upskilling and reskilling actions during 2027. *This is estimated to mean* (60%) of the workforce.

The estimations in this commitment and milestones in terms of the workforce share are based on the estimations of growth of the offshore renewable energies ecosystem and its workforce detailed in footnotes 16 and 17. For this purpose, actions of the LSP and their members are expected to influence the share of the workforce participating in up- and reskilling at sector level, even if their actual remit of activity doesn't reach the whole ecosystem.

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[17] Estimated at 79,250 jobs: 77,000 jobs supported by offshore wind (Wind Energy and the European Union, 2022) and 2,250 jobs supported by the ocean energy (European Commission y Directorate-General for Maritime Affairs and Fisheries. *The EU Blue Economy Report 2019).*

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[18] Terms of Reference - https://oreskills.eu/wp-content/uploads/2023/12/P4S_ORE_ToR.pdf

[19] The FLORES project will give support to the partnership from 2022 to 2024, and the Shorewinner project will support more actions from 2024 to 2028.

[20] The 2030 targets of the European Pillar of Social Rights Action Plan include to reach at least 60% of all adults participating in training every year.

Supported by

Industry

Trade Unions

Educational and Training Organisations

Research Organisations

Administrations

Other organisations

ANNEXES TO THE PRESENT DOCUMENT

- Terms of Reference stating the governance of the Partnership.
- Proposed lines of action to launch the pact for skills at the ORE sector.
- Letter of Intent to integrate the Partnership launching the Pact for Skills in the ORE

All available at https://oreskills.eu/community-pilot-actions/