



Offshore wind industry enjoys best-ever year with 21.1 GW of installations and prepares for “new era of growth”

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29 June, Lisbon | The offshore wind industry enjoyed its best-ever year in 2021, with 21.1 GW of new capacity connected to the grid, according to the latest *Global Offshore Wind Report* launched by the Global Wind Energy Council (GWEC) to coincide with the United Nations Ocean Conference in Lisbon.

The report shows that the offshore wind industry is preparing for a new era of dramatic growth as governments turn to the technology and establish ambitious new targets in their search for energy security and affordability, and strive to meet new net zero emissions ambitions. The implementation of these upgraded targets should start to deliver yet more record-breaking years from 2025 onwards.

GWEC's *Global Offshore Wind Report 2022* shows that governments are getting more ambitious about offshore wind. GWEC Market Intelligence revises up its outlook for 2030 by 45.3 GW, or 16.7%, from last year's report and believes that 260 GW of new offshore wind capacity could be added in 2022–2030, bringing total global offshore wind installations to 316 GW by the end of this decade.

Speaking from UNOC in Lisbon, Ben Backwell, GWEC CEO, said: “It has been an astonishing year for the offshore wind sector. Governments across the world are now recognising the once in a lifetime opportunity that offshore wind represents to deliver secure, affordable and clean energy while fostering industrial



development and job creation. Now we need to work to rapidly implement targets and ambitions, while building a health and “fit for growth” global supply chain.

“At the same time, the wind industry needs to take its place as a key custodian of a healthy Ocean ecosystem, as it becomes one of the world’s most important marine-based industries. We need to work with stakeholders and communities in the Ocean environment to ensure that we scale up in a way that ensures holistic cooperation and planning and ensures the highest level of harmony with biodiversity and conservation goals.

“Working together we can deliver a clean and secure energy system that delivers power while helping the world reach net zero.”

Political commitment to net zero already puts offshore wind in a vital position for reaching net zero. The energy crisis and the Russian invasion of Ukraine has seen governments further raise their offshore wind targets as they look to secure their energy supplies. The *Global Offshore Wind Report 2022* forecasts government targets will take the world to around 370 GW of capacity by 2031, close to the GWEC/IRENA Offshore Wind Energy Compact’s target of 380 GW of offshore wind installations by 2030¹.

In order to go further and reach the 380 GW figure by 2030, a gargantuan effort is required to turn these ambitions into actions. Government, industry and other stakeholders must work together to ensure that seabed concessions are being licensed at the right pace, to make sure that planning processes are simplified and made more efficient and to ensure that procurement schemes such as auctions can deliver sustainable prices which recognise the system and social value of offshore wind energy.

It is essential that governments and the private sector work together to ensure the existence of a well-functioning global supply chain that is able to scale up rapidly over the next decade to meet growth. At present, the health of the supply chain is

¹<https://gwec.net/global-offshore-wind-energy-compact-signed-by-the-international-renewable-energy-agency-irena-and-the-global-wind-energy-council-gwec/#:~:text=The%20agreement%20states%20that%20by,net%20zero%20by%202050%20scenarios.>



under threat from inflationary pressure from commodity and logistics price increases, while suffering from “race to the bottom” pricing and uneven demand growth.

Inaction would risk the opportunity for offshore wind to push the energy transition forward at scale, creating significant national and local jobs, delivering economic growth and lowering energy prices, all while supporting energy security.

Ulrik Stridbæk, Vice President, Head of Regulatory Affairs, Ørsted, said: “The global offshore wind industry is at a critical inflection point. On one hand, we see political ambitions increase exponentially. But on the other hand, the industry is facing increasing costs and disrupted supply chains, jeopardising its long term ability to realise these targets.

“GWEC’s Global Offshore Wind Report is a crucial moment to take stock and convene the industry to discuss how to overcome these challenges and unlock the investments needed for offshore wind to play its part in keeping 1.5 degrees alive.”

The Data

There was a three-fold increase in grid connection worldwide from 2020 to 2021, with 21.1 GW of new installations bringing global capacity to 56 GW. Year-on-year growth of 58% means offshore wind now represents 7% of total global cumulative installations.

The data also contains a clear demonstration of what tightly-aligned ambition and action can deliver. China contributed 80% of new offshore installations last year, which makes 2021 the fourth year the country has led the world in new installations. Vietnam’s proactive approach delivered further capacity, and the *Global Offshore Wind Report 2022* forecasts that by the end of 2022 Asia will replace Europe as the world’s largest offshore market. The report suggests it could take until 2031 for Europe to regain the crown.

This was also the year that showed floating offshore wind has now passed



the demonstration stage and entered the pre-commercial phase, with 57 MW of new installations bringing the total installed globally to 121.4 MW. Of those new installations, 48 MW were in the UK, 5.5 MW in China and 3.6 MW in Norway.

The *Global Offshore Wind Report 2022* predicts that by 2031 315 GW of new offshore wind capacity will be added, bringing the total capacity to 370 GW – close to GWEC/IRENA’s target of 380 GW by 2030 for a net zero pathway. As the volume of annual offshore wind installations is expected to more than double from 21.1 GW in 2021 to 54.9 GW in 2031, offshore’s share of new global wind installations is set to grow from 23% in 2021 to at least 30% by 2031.

Considering the increased floating wind target in the UK and the accelerated floating project development activities in Europe, Asia and North America, which bring the current global floating project pipeline to 120 GW, GWEC has upgraded its 2030 global floating wind forecast by 14% from last year’s report and predicts that 18.9 GW is likely to be built globally by 2030, of which 11 GW will be in Europe, 5.5 GW in Asia and the rest in North America.

GWEC Market Intelligence has identified more than 700GW of offshore wind projects that are at different stages of development worldwide, of which 120 GW is floating wind.

Currently, 23 GW capacity of offshore wind projects is under construction. With 49.5% market share, Europe is now taking the lead in offshore wind project construction, followed by Asia (46.4%) and the US (4.1%). China is the most active market with 7.8 GW under construction, followed by the UK (5.6 GW), Netherlands (2.3 GW), Taiwan (2.1 GW), France (1.4 GW), and Germany (1.1 GW).

GWEC members and GWEC Market Intelligence subscribers can download the 2022 Global Offshore Wind Project Pipeline Report today, as well as the Global Offshore Wind Report, for the latest data.

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GWEC is a member-based organisation that represents the entire wind energy sector. The members of GWEC represent over 1,500 companies, organisations and institutions in more than 80 countries, including manufacturers, developers, component suppliers, research institutes, national wind and renewables associations, electricity providers, finance and insurance companies.

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