

EIC INSIGHT REPORT

GLOBAL OFFSHORE WIND

Executive summary

Operational offshore wind capacity surpassed 30GW in 2020, with over 5GW added throughout the year in what represents yet another industry record. While the UK continues to retain its status as global leader in offshore wind, China is closing the gap, having surpassed the 7GW mark for operational capacity in 2020. The Chinese project pipeline of over 56GW currently being tracked in the EICDataStream project database can almost be described as a league of its own and is expected to provide the country with a leadership position in the first half of this decade.

Offshore wind's potential does not, however, stem from the significant growth in one market, but the fact that it is now represented on almost every continent. Striking within the just under 404GW of capacity additions by 2035 that the EIC is tracking, is the significant role played by emerging markets and the leading industry players pushing them onto the offshore wind scene. Examples include Brazil with over 47GW in the pipeline, Ireland with just under 23GW and Poland with roughly 9GW of project activity. In the first two examples, this pipeline has emerged while developers and supply chain companies continue to wait for offshore wind development and legislation frameworks to be finalised.

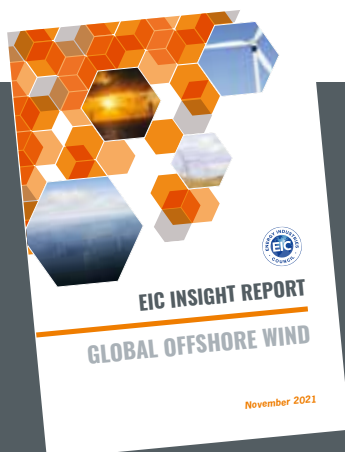
The global offshore wind sector has also not been held back by the

global Covid-19 pandemic. While it is important to remember that the past year has had devastating impacts on certain industries, communities, and countries – and continues to do so – the offshore wind market has largely been able to move forward. Initial delays and disruptions to fabrication and component delivery, to name just two examples, were reported alongside final investment decisions (FIDs) being reached on several projects in 2020. These include the 2.4GW Dogger Bank A&B offshore wind farms in the UK, the 342MW Kaskasi project in Germany, and the 496MW Saint Brieuc project in France. Although administrative and consenting processes had to be adjusted in many countries, tender and auction rounds were launched or progressed: the Hollandse Kust Noord tender in the Netherlands that was awarded to the CrossWind joint venture (Shell-Eneco), the UK's seabed leasing rounds under Crown Estate England & Wales as well as Crown Estate Scotland, and the offshore wind solicitations in New York (2.5GW), New Jersey (2.4GW) and Massachusetts (1.6GW).

The offshore wind market has featured prominently in many countries' post-Covid recovery plans and in proposed roadmaps to net-zero carbon emissions by 2050. The coupling of renewable energy in general, and offshore wind in particular, with the production of green hydrogen is gaining in significance. The EIC is currently tracking 59 projects in Europe alone that reference the link between onshore and offshore wind to green hydrogen production

using electrolysis. The combination provides a pathway for industrial and downstream market players to decarbonise their feedstock and operations in the long-term, while offering an additional source of revenue and electricity offtake for offshore wind generators. The offtake aspect is especially important considering the ongoing challenges and uncertainties in some mature and emerging markets in curtailment of renewable energy and lack of onshore transmission infrastructure.

To realise the upcoming offshore wind pipeline available, governments and industry will need to address ongoing issues in the consenting and financing of developments. For more mature markets such as the UK or Denmark that may mean updating legislative frameworks to incorporate cumulative impacts from offshore wind farms or streamlining planning in reaction to a growing number of applications. For emerging ones this could include identifying the right level of subsidy to promote growth and local investments. In the context of progressing decarbonisation efforts, it will be particularly important to promote development frameworks that address the integration of various technologies – such as electrolyzers and offshore wind – rather than support a single sector.



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