

EIC INSIGHT REPORT



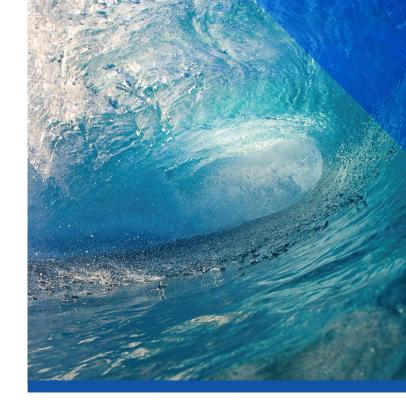
Wave & Tidal

March 2025



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Executive summary

The global wave and tidal energy sectors have the potential to be able to provide a huge amount of renewable energy and could drastically aid in the goal of Net Zero. The International Energy Agency's Technology Collaboration Program on Ocean Energy Systems (IEA-OES) released a roadmapthatoutlines a comprehensive strategy to help drive the global development of ocean which outlines the potential for wave and tidal stream technologies to contribute 300GW of renewable energy generation capacity (specifically 120 GW of tidal and 180 GW of wave) by 2050 to global

net zero targets and be worth a value of \$340bn. The tidal sector is considered more established and closer to commercialisation than the wave sector for now which is predominantly still in its testing and demonstration phase.

There are a handful of markets leading the way in these technologies, the UK is at the forefront of both testing wave devices and tidal stream energy with 28 projects in the pipeline and a recommended target of 1GW of tidal energy and 300 MW of wave energy by 2035 from the Marine Energy Council. Furthermore, with mechanisms such as the Contract for Difference scheme



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awarding tidal just over 120 MW as of March 2025, it is expected reduce the risk and capital costs of projects therefore making the technology more attractive for investment. Scotland and Wales lead with the project pipeline, and strategies are in place to aid the sectors as well as funding schemes. With testing sites like the European Marine Energy Centre and Morlais to push further in innovation and development, and working with globally leading developers such as SIMEC, Orbital Marine Power and Mocean Energy, the number of achievements continue to grow year by year.

With a pipeline of 13 projects the EU aims to reach 1 GW of marine energy by the early 2030s. Funding schemes like the Horizon Europe program, BlueInvest and many others that include ocean energy are also helping the development of many significant projects and pushing for further collaboration between countries in Europe as well as globally. Other regions that are involved

is APAC, in particular Indonesia, with a sizeable project pipeline of eight projects, has worked with international developers and is working towards a blue economy. In North America, the US and Canada has twelve projects underway covering various technologies at the FORCE testing site in Nova Scotia and the markets have funding available to push for innovation.

The wave and tidal market is still emerging especially compared to other renewable sectors but it has clear potential and could play a massive part towards the Net Zero goal. More policies and regulations need to be introduced to allow this relatively nascent sector to grow.

This report analyses each market providing a comprehensive analysis of trends and opportunities for you to explore but also challenges the sector faces.



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