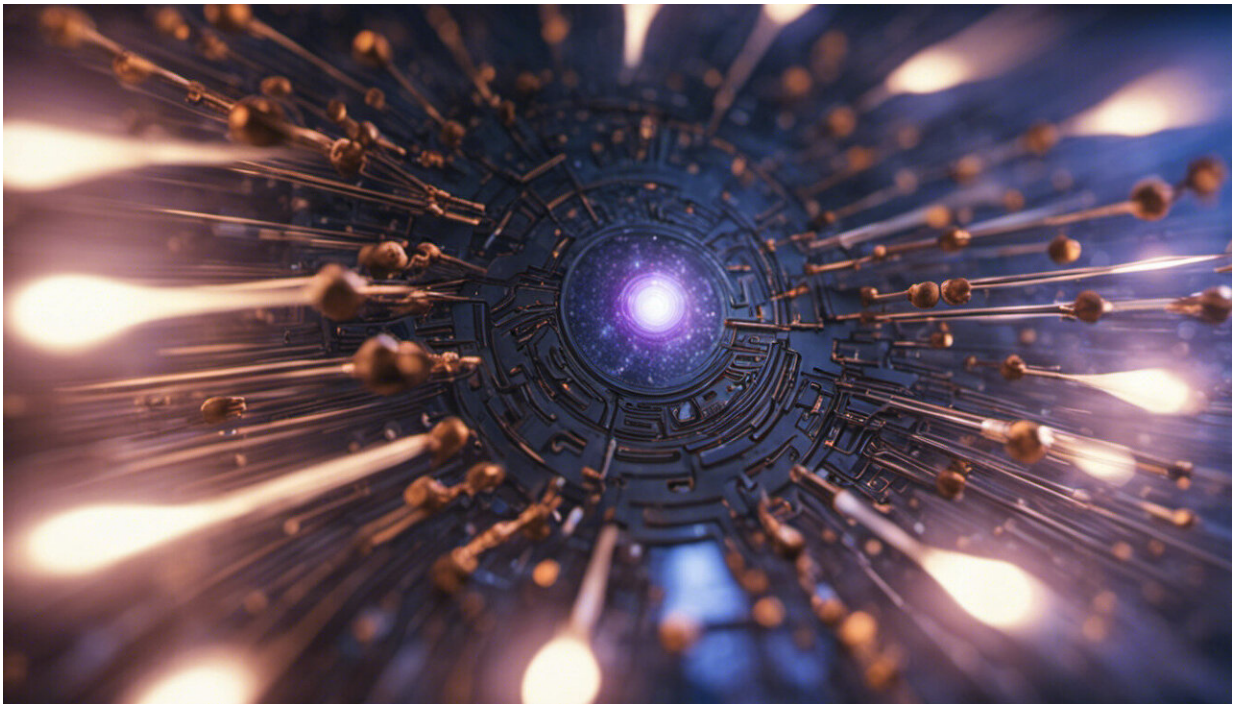


Getting wave energy technology from the lab to the market

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Credit: AI-generated image ([disclaimer](#))

Wave energy is a form of renewable energy that can be harnessed from the motion of waves. On its own, it could easily meet all of the world's energy needs. Europe, home to several of the finest resources thanks to its Atlantic Ocean coastlines, is in a race with other global competitors to commercialize wave energy technologies.

The EuropeWave project is helping to transition to [commercial viability](#) by gathering the most promising wave energy technology solutions from developers in Europe and beyond. To do so, it has adopted a pre-commercial procurement approach based on the one pioneered by Wave Energy Scotland.

Over several phases, this innovative model will be used to identify, evaluate and fund the most promising technologies. During the final phase in 2025, the top three technologies will be tested under real-life sea conditions at the European Marine Energy Center (EMEC) in Scotland and the Biscay Marine Energy Platform (BiMEP) in Spain.

Two industrial developers demonstrating what they have

Australia's Bombora Wave Power is one of the seven technology developers awarded contracts as part of the project's first phase. It has successfully completed tank testing of a floating foundation system fit for a solution where mWave technology is joined with a wind turbine onto a single floating offshore platform. mWave was developed by the company to convert wave energy into electricity. The technology harnesses large amounts of wave energy to produce environmentally friendly, dependable and competitively priced renewable energy for commercial power generation.

Scotland's Mocean Energy is another developer that has initiated scaled-down tank trials of its 250 kW Blue Horizon wave energy device. The company is participating in an 8-day test run at a University of Edinburgh facility. 3D-printed scale models of the device will be tested. Blue Horizon is a wave energy machine for supplying grid power to remote and island communities.

"The purpose of our testing is to validate our numerical models and the hydrodynamic performance of our 250kW design," stated Chris Retzler, founder and chief scientist at Mocean Energy in a news release posted on the leading technology and innovation hub "The Engineer."

"We already have a huge amount of real-world data from our 10kW Blue X prototype which was deployed successfully at EMEC last year. This is now being developed into our commercial 20kW Blue Star device which will provide autonomous power to a range of subsea equipment, inspection and maintenance systems. The 250kW Blue Horizon is a much bigger machine. It will be 2.5 times the length of Blue X but will generate 25 times the power."

Retzler added, "This test program is enabling us to take what we know already and further refine and validate our [numerical models](#), looking specifically at optimum power production and survivability of the Blue Horizon in the actual sea states it could experience at BiMEP or EMEC. There is no facility better suited to our requirements and the test and validation program is going well."

EuropeWave (Bridging the gap to commercialization of [wave energy](#) technology using pre-commercial procurement) ends in May 2026.

More information: EuropeWave project website:
www.europewave.eu/

Provided by CORDIS

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