

Proposed Approach

[WaveAmp](#) is seeking to join an existing or forming consortium for [HORIZON-CL5-2027-02-D3-09](#) as a contributing technology partner.

Weight-Changing Energy (WCE) is an innovative energy-conversion technology, protected within [TWEFDA](#)'s patent family, capable of increasing the performance and flexibility of wave-energy systems. It targets the performance and LCOE barrier that continues to constrain commercial deployment of wave energy.

WaveAmp is flexible about its exact position in the consortium. Its preferred role is to receive and deliver well-defined activities or tasks within the project. Where useful to the consortium, WaveAmp can also take responsibility for a bounded Task, or potentially a focused Work Package, but is not seeking overall project leadership.

If successfully validated, WCE could represent more than an incremental WEC improvement: it could establish an additional renewable-energy conversion pathway and materially improve wave-energy economics through LCOE reduction, helping unlock large-scale commercial deployment across the sector.

- Relevant activities: WCE validation/test definition; performance quantification; WEC integration and control/interface requirements; techno-economic/LCOE assessment; IP, exploitation and commercialisation.
- WaveAmp is a technology/IP partner, not an EPC, manufacturer or installation contractor; implementation activities would be undertaken with specialist consortium partners.

Experience

Technology development has been led through TWEFDA since 2016 (company incorporation in January 2018). WCE forms part of a broader protected technology platform and is now being developed as a distinct commercial opportunity for the wave-energy sector.

- In-silico proof-of-concept work on the non-reciprocal energy-conversion principle within known physical laws.
- Independent preliminary hydrodynamic study by TADEK, supported by technical and video analysis.
- European patent granted and unitary protection obtained.
- Prototype and controlled wave-tank validation identified as the next development steps.
- Founder has prior experience building European R&I consortia, including two EIC Pathfinder Open applications (2024 and 2025) developed in collaboration with JO Group.
- Ready to work alongside WEC developers, universities, test centres, hydrodynamics specialists and techno-economic partners.

Organisational Capabilities

WaveAmp was created to commercialise WCE in Europe. TWEFDA Limited is the originating technology and IP owner, giving WaveAmp direct access to the inventor, the technical know-how and the protected technology base.

- Patented WCE technology and direct inventor / IP-originator access.
- Team experience exceeding 100 combined years across offshore engineering, marine systems and renewable-energy finance.
- Founder/inventor: Marine Engineer (BEng), EUR ING, AMRINA, with 25+ years of industry experience.
- European patent granted with unitary protection; related patent-family applications progressing in other major jurisdictions.
- Independent preliminary hydrodynamic work by TADEK indicating substantial performance-improvement potential.
- Capabilities in system architecture, modelling, test definition, integration requirements, IP strategy, licensing and commercialisation.
- Wave-tank testing route identified at the University of Strathclyde; formal testing arrangements are not yet concluded.

Administrative Information

Role sought: Consortium Partner / Technology Provider

Preferred participation: assigned technical and innovation activities within an established consortium; open to bounded Task ownership and, if specifically requested, a focused Work Package.

Not sought: Coordinator / overall Project Lead.

Organisation: WaveAmp Ltd

Technology / IP originator: TWEFDA Limited

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