

Ocean Harvesting to raise 3 MEUR for sea trials with InfinityWEC wave energy converter

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To finance sea trials with wave energy converter InfinityWEC at scale 1:3, Ocean Harvesting is raising 3 MEUR in equity investment at a pre-money valuation of 7 MEUR. This investment will be combined with public financing for the project. The sea trials are planned to be completed by the end of 2024, after which commercialization of the technology will be initiated with sea trials of full-scale systems.

A transition to 100% renewable energy is necessary to mitigate climate change. Solar and wind energy are driving the transition but will not be sufficient given the enormity of the task and geographical, space and other constraints. Much more renewable energy will be needed. Wave energy is a vast, unexploited resource for renewable electricity generation. It can furthermore add substantial value by reducing variations in electrical grids with a high degree of renewables, and thereby reduce the amount of energy storage needed to balance electricity supply and demand.

InfinityWEC can unlock the potential of wave power through its advanced power take-off and control system, which tunes to every individual wave to produce electricity efficiently in all sea states. Furthermore, a unique end-stop function ensures both survival and continuous, reliable power production even in the harshest wave conditions. The buoy is made of high strength concrete, with weight similar to a conventional steel hull, but at a quarter of the cost, a third of the CO₂ footprint, and one tenth of the manufacturing time. In all, the exceptional performance and reliability, using proven subsystems and a modular design, make InfinityWEC a highly competitive solution for the future global energy market.

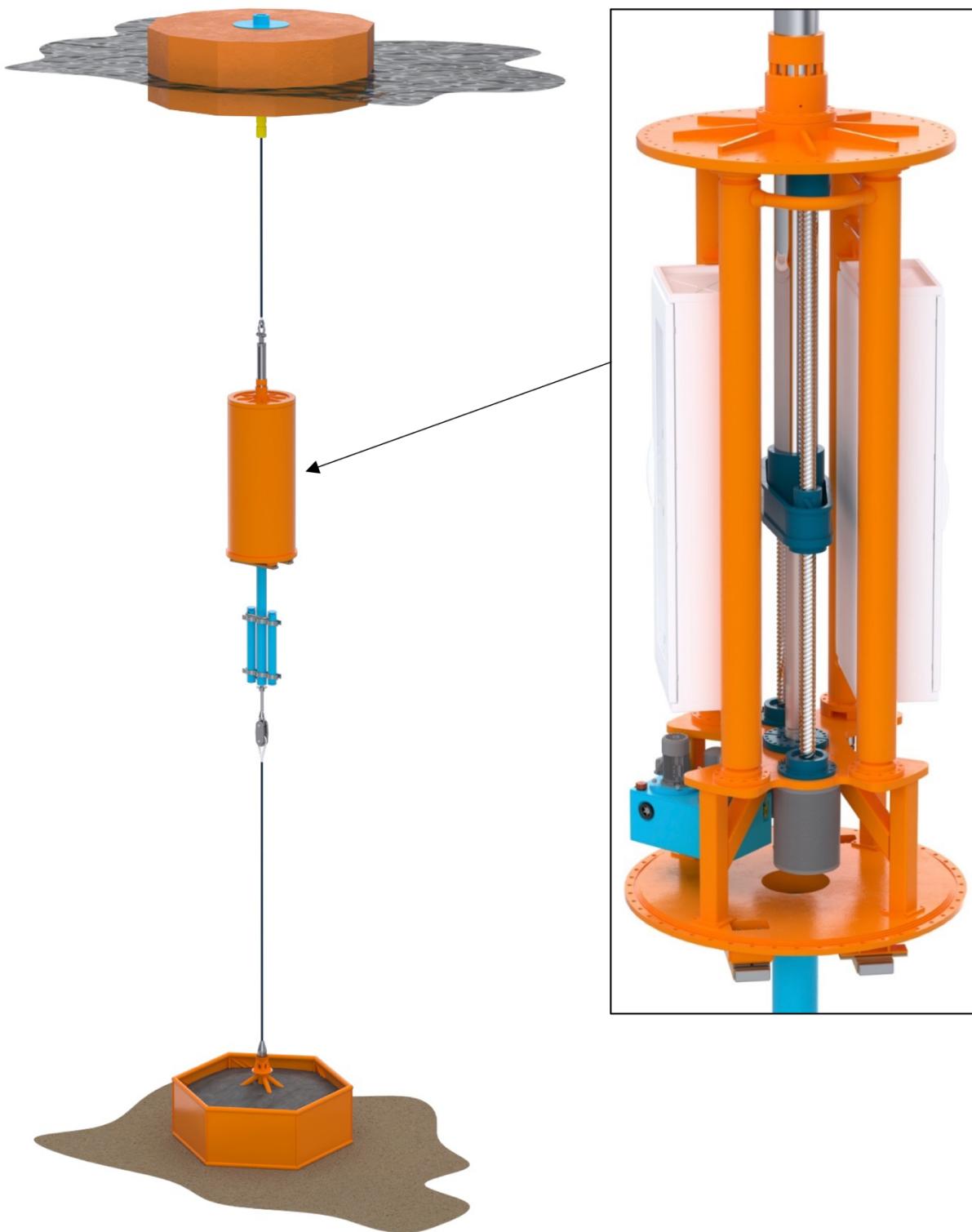
Ocean Harvesting is preparing for sea trials of InfinityWEC at scale 1:3 to be performed off the west coast of Sweden. The sea trials will validate the performance in real sea environment and the results will be used to further develop and improve the full-scale system with regards to energy yield, system efficiency, availability, and ultimately affordability.

Ocean Harvesting follows the staged validation framework for ocean energy technologies set out by Ocean Energy Systems (IEA). InfinityWEC has, with simulations and physical tests in a test rig in scale 1:10 and in a wave tank, been successfully verified with regards to critical functionality of the power take-off and control system, sea-keeping and survival functions in extreme conditions, and the power production performance. The technology is on track towards a competitive cost of energy at 100 EUR / MWh already at 100 MW installed capacity, and < 35 EUR / MWh at large scale deployment, with the added value of reducing the need for energy storage to balance supply and demand of electricity.

The market for InfinityWEC ranges from utility-scale wave farms to off-grid applications such as oil & gas platforms, island communities, green hydrogen production and aquaculture.

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InfinityWEC prototype in scale 1:3 with a close-up view of the power take-off



About Wave Power

The estimated global theoretical potential of wave power¹ exceeds the global use of electricity and is available in coastal areas where most of the population lives.

Wave power produces electricity more consistently and at different times compared to wind & solar power and therefore contributes to offset intermittency, reducing the total cost of carbon-free electricity. Wave power furthermore needs only half the amount of energy storage to balance the power production to a constant output throughout the whole year compared to wind power, further reducing the total cost of energy.

Wave power will be an important part of the future renewable energy mix, contributing both to lower cost of energy and a more stable energy system.

About Ocean Harvesting and InfinityWEC

Ocean Harvesting is a privately held company with offices in Karlskrona and Gothenburg, Sweden. After years of research within the wave energy sector, the company started in 2017 to develop the InfinityWEC concept, a point absorber type wave energy converter.

InfinityWEC is:

- **Efficient** - Breakthrough power take-off ensuring maximum power output from every wave.
- **Reliable** - Holding the buoy submerged through the crest of large waves to secure survival and to enable continued power production also in the harshest wave conditions.
- **Scalable** - Proven subsystems, produced, assembled, and installed efficiently, allowing large scale roll-out. Highly recyclable.
- **Ideal partner for Wind & Solar** - Producing power at different times, improving balancing of electricity supply and demand. Shared infrastructure and operational costs.
- **Low Levelized Cost of Energy (LCoE)** – On track towards 100 EUR/MWh in early stage and <35 EUR/MWh long-term, highly competitive compared to all other energy production.

What makes InfinityWEC competitive is the advanced power take-off system, using a combination of ball screw actuators and a hydraulic pre-tension system (proven technologies) to provide instant force control with high efficiency. This enables the use of reactive force control to maximize the energy output in every individual wave. A unique survival function holds the buoy submerged through the crest of large waves, protecting the system from excessive load and enabling power to be produced also in the most severe wave conditions.

InfinityWEC is engineered for sustainable large-scale production and effective logistics. The power take-off uses proven subsystems. InfinityWEC's prime mover (buoy), is made of concrete casted with locally sourced materials at the installation site in a process common in civil engineering, eliminating long transportation of materials. A special high strength and sustainable concrete mix is being developed in collaboration with RISE Research Institutes of Sweden, enabling a prime mover with equivalent weight to a conventional steel hull, at 1/4 of the cost and 1/3 of the CO2 footprint.

The excellent performance and reliability, combined with a modular design where all critical parts are easily constructed, transported, installed and maintained, make InfinityWEC a very competitive solution for the future global energy market.

The market for InfinityWEC ranges from utility-scale wave farms to off-grid power supply, for island communities, green hydrogen production and other offshore industrial installations such as oil & gas and aquaculture.

Read more: oceanharvesting.com

¹. OES An International Vision for Ocean Energy 2017