

Introduction

In these times with a lot of “noise”, where should you focus your attention? What is just noise, what is serious, what is fact-based etc.?

In Wavepiston we try to filter out the noise. We focus on our cause, bringing wave energy to the world making a large, positive impact.

As informed in our October newsletter, we upgraded four full-scale energy collectors to accommodate for the lessons learned during previous deployments. We have now managed to install the first of the energy collectors, and we are working focused on preparing the installation of the remaining ones, ensuring precious experimental data from operating the system in real offshore conditions.

In parallel we collaborate with our strong partners in the technology development projects to improve and mature the technology to a commercial product.

And we continue our project development work to secure sites and funding for pilot farms that can be expanded to commercial farms in next phase.

Introduction continued.

On the political scene many people have asked if Wavepiston will be negatively impacted by the changes in the US. We do not expect this. Both US and Europe are expected to keep investing in and supporting Ocean Energy.

As always, there are things we can impact and things that are outside our control which we must plan with as framework conditions. That's life.

Enjoy the read.



Michael Henriksen
Wavepiston CEO

*Energy Collector stored in Port of Taliarte waiting to be installed.
The paddles (a.k.a. sail of the Energy Collector) have been taken off the Energy Collector for storage and transport.*

Gran Canaria Update

Wavepiston has successfully installed the first of four upgraded energy collectors that were prepared for deployment. This is thereby the first of the 3rd generation energy collectors that will be installed at PLOCAN in Gran Canaria. We expect the other three energy collectors to be deployed in the coming period, when weather windows and vessel availability allow us to do so.

Earlier in January we moved the energy collector from the port of Arinaga to Taliarte, which is closer to the deployment site. By splitting the transport, we shorten the required offshore operations per activity, thereby increasing the number of usable weather windows. In other words, we create more flexibility in our deployment plan. We plan to do the same with the remaining energy collectors, saving us valuable time in the offshore operations.



Energy Collector installed at PLOCAN, Gran Canaria.

Technology Development

COHSI-WEC

A second wave-tank testing campaign was successfully completed in October 2024 at Aalborg University, which focused on the modelling of flexible blades for the sails. Particular attention was paid to correctly modelling the flexibility of the blades at the wave-tank scale. These tests have been built on the first testing campaign that was completed in July 2024, which investigated solid and perforated blades.

Analysis of the new tank testing results demonstrated that the extreme loads on the sails that occur during storms could be reduced by up to 60% with the use of flexible blades for the sails, which represents a significant advance in sail design.

In addition, an unexpected but positive outcome from the tests was identified, the use of flexible blades can increase the power capture by about 10%.

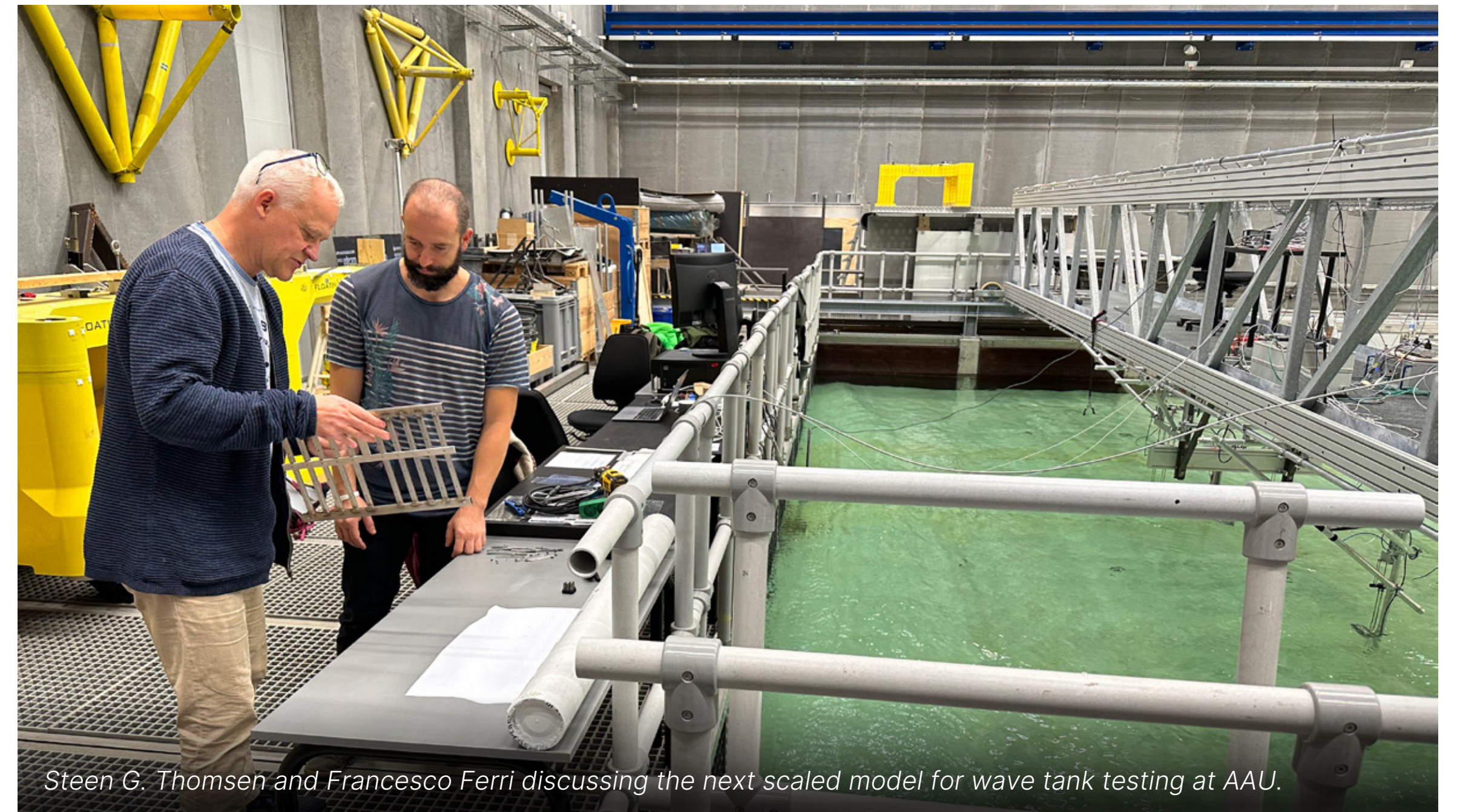
Further investigations are planned to investigate whether the power capture can be further improved without affecting the extreme loads. More news to come during 2025.

This project receives funding from the [Energy Technology Development and Demonstration Programme, EUDP – Det Energiteknologiske Udviklings- og Demonstrationsprogram.](#)

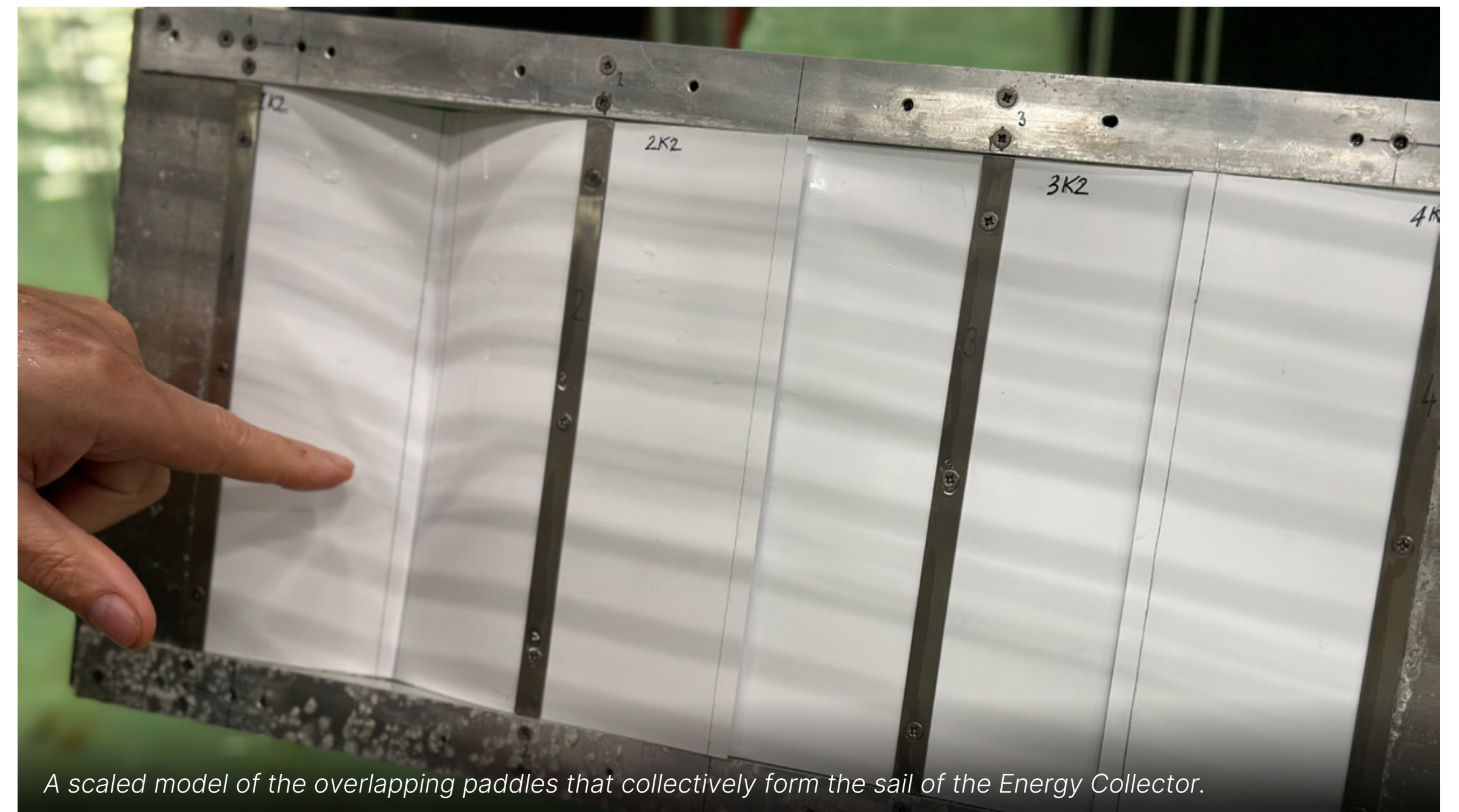
EUDP

This project is
co-funded by EUDP

COHSI-WEC



Steen G. Thomsen and Francesco Ferri discussing the next scaled model for wave tank testing at AAU.



A scaled model of the overlapping paddles that collectively form the sail of the Energy Collector.

Technology Development

SHY

The purpose of the [SHY project](#) is to develop an update to the Wavepiston power take off (PTO) system based on a novel pump concept.

Now, several months in the project, the first experimental results are starting to come in.

One of the most important novelties of the pump is a polymer-lined pump housing. Polymer-based moving seals are common, but the concept of a polymer-based pump housing is both new and innovative. Therefore, the project is performing its own wear tests. [The Technical University of Denmark \(DTU\)](#) and Wavepiston have built a customised test rig where strips of candidate seal material are worn against polyethylene (PE).

Among the tested candidates there is one material combination that shows extremely good promise, with 7 years of service life and low wear on seals and pump liner material.

TEAMER

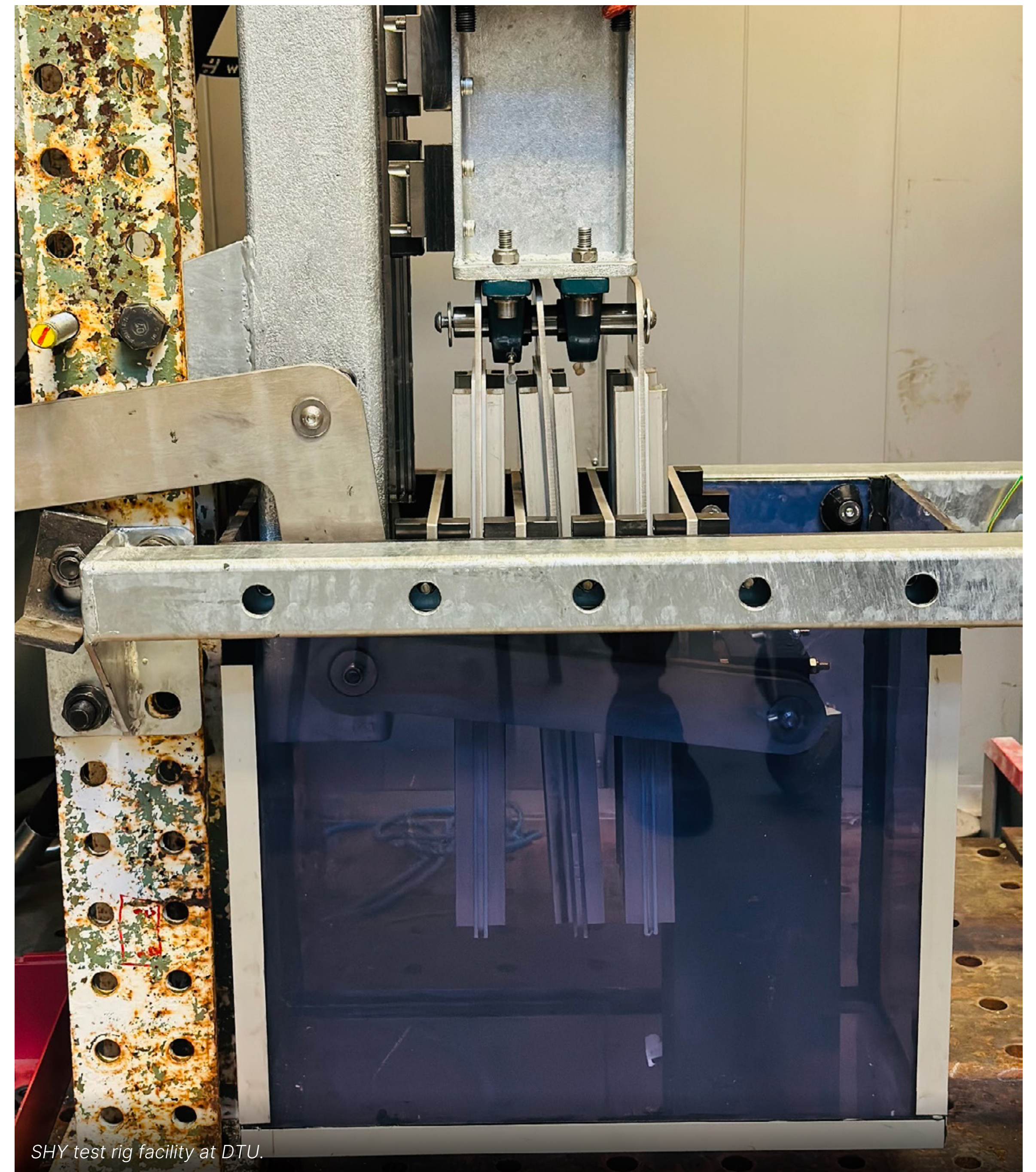
Wavepiston has been selected as one of the 15 approved marine energy projects under the U.S. [Testing Expertise and Access to Marine Energy Research](#) (TEAMER) programme.

This initiative, funded by the [U.S. Department of Energy](#) (DOE) and managed by the [Pacific Ocean Energy Trust](#), allocated nearly \$1.9 million through its 14th Request for Technical Support (RFTS) to accelerate the commercialisation of marine renewables.

As part of the project, [Sandia National Laboratories](#) and [National Renewable Energy Laboratory](#) will provide Wavepiston with a Technology Evaluation and Development Advisory. The work is expected to commence during the 2nd half of 2025.



Funded by
the European Union



SHY test rig facility at DTU.

Commercial Development

WEB

After 6 months of dedicated effort between Wavepiston and the team of [Export Barbados \(BIDC\)](#) we announced the conclusion of our Wave Energy in Barbados (WEB) project, marking the end of the pre-feasibility study.

The initiative sought to harness the untapped potential of wave energy along Barbados' coastline to diversify the islands renewable energy portfolio and accelerate its climate ambitions to become net-zero by 2030.

WEB concluded the feasibility of Wavepiston wave energy farms along Barbados' Atlantic coast and provided valuable insights into the technical, environmental and economic challenges that need to be overcome. The project

also contributed to Wavepiston's broader understanding of wave energy potential in [small island developing states \(SIDS\)](#).

The project team is determined to continue the development of wave energy farms in Barbados as WEB laid the groundwork for future opportunities.

WEB received funding from the European Union through the [Eureka Innowide](#) programme.

Project Development

Wavepiston continues to develop its existing pilot farm projects in Gran Canaria and Martinique, and continues the lookout for new project proposals and funding opportunities in key markets.



Barbados Coast.



Small island developing state.

Events, Conferences and Interviews

In November Michael Henriksen and Emiel Schut joined the annual [Ocean Energy Europe conference](#), this time hosted in Aviemore, Scotland. There were many positive vibes at the event due to the development the sector has gone through in recent years. The conference always provides a good opportunity to catch up with our colleagues in the sector and to

engage with project developers, suppliers and authorities.

Michael Henriksen was invited to join a panel discussion during the [Offshore Energy Exhibition & Conference](#) in Amsterdam, highlighting the importance of non-price criteria in relation to future energy farms. While Esther Capote Kerr represented Wavepiston during the

[Canagua y Energia International Fair](#) in Gran Canaria. We closed 2024 with the [Deep Tech Alliance Summit in Paris](#).

Wavepiston participated in the 'Challenges for the decarbonization of the blue sector'-panel during this year's [Ecoislas 2025](#) in Gran Canaria. Emiel Schut joined the stage to share Wavepiston's experience and Esther Capote Kerr joined the event and

the many meetings that were lined up.

Finally, Michael Henriksen was interviewed for an episode of Europe Connected, shown on Dutch national television during December 2024. Missed it? You can see the interview [here](#) and the full episode [here](#).



Emiel Schut participating in the panel discussion at Ecoislas in Las Palmas, Gran Canaria.



Michael Henriksen participating in the panel discussion at OEEC in Amsterdam, The Netherlands.



LTR: Emiel Schut, Bruno Lemort (CTO, YS Energies Marines Développement) and Michael Henriksen at OEE2024 in Aviemore, Scotland.