ASX ANNOUNCEMENT
29 March 2023

Carnegie Presentation at EuropeWave Conference

Carnegie Clean Energy (ASX: CCE) ("Carnegie" or the "Company") is pleased to announce that it delivered a presentation at the second annual EuropeWave conference in Brussels, Belgium (28/03/2023). The presentation, appended below, outlined the CETO technology, including target applications of the technology, learnings from phase 1 and an outline of Phase 2 activities under the Programme.

The conference is part of the €20m EuropeWave PCP Programme, where Carnegie, via its wholly owned subsidiary, CETO Wave Energy Ireland Limited, was selected as 1 of 5 contractors to deliver Phase 2 of the Programme. Phase 2 includes tank testing of critical technologies in Spain. Carnegie is sharing in a budget of €3.6 million ($5.8M AUD) for this phase which commenced in October 2022 and will run through until the end of June 2023.

EuropeWave's annual conference was hosted in Brussels with participants including global renewable energy experts and European Commission officers, to shape the future of the wave energy sector and accelerate its adoption as a leading source of renewable energy.

Carnegie's CEO, Mr Jonathan Fiévez, commented: *"It's fantastic to see the European team presenting on the significant CETO progression and Phase 2 activities at the EuropeWave conference. This programme is providing a robust independent framework to validate device performance and reliability while opening doors for our technology in the huge electricity market in Europe and beyond."*

	Phase 2 Activities and Team	WP 1 Project Mngt	WP2 FEED	WP3 Numerical Modelling	WP4 Tank Testing	WP5 PTO Testing	WP6 Operational Planning	WP7 Financial Modelling	WP8 Certification Pathway
Consortium Members	CETO	Leading	Leading	Leading	Supporting	Leading	Leading	Supporting	Supporting
	saitec offshore technologies	Supporting	Supporting				Supporting		
Subcontractors	HUTCHINSON BELT DRIVE SYSTEMS		Supporting			Supporting			
	Hewlett Packard Enterprise		Supporting		Supporting				
	IH cantabria				Leading				
	VGA		Supporting			Supporting			
	JULIA F. CHOZAS CONSULTING ENGINEER							Leading	
	DNV YAVIN FOUR CONSULTANTS								Leading

Carnegie's Phase 2 Outline of EuropeWave PCP Programme

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Following the conclusion of Phase 2, another rigorous selection process will be conducted, with three companies out of the remaining five selected for Phase 3. Carnegie will keep shareholders informed of its progress throughout 2023.

This announcement has been authorised by the Chairman and CEO.

For more information

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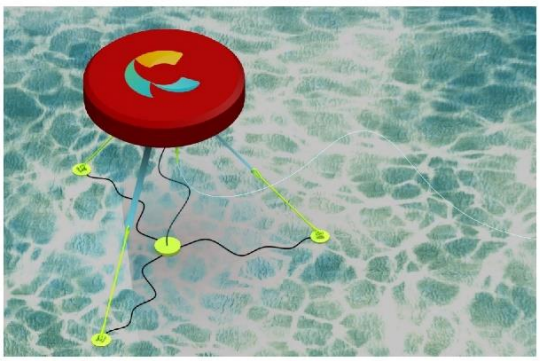
ABOUT EUROPEWAVE PCP

With almost €20 million in funding for the 3 phases of the programme, which runs from 2022 to 2026, the EuropeWave PCP is a collaboration between Wave Energy Scotland (WES), a subsidiary of the Scottish Government's Highlands and Islands Enterprise, and the Basque Energy Agency (EVE).



This is part of the EuropeWave project that has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 883751.

https://www.europewave.eu/

ABOUT CARNEGIE & CETO WAVE ENERGY IRELAND

Carnegie Clean Energy (ASX: CCE) is a technology developer focused on delivering ocean energy technologies to make the world more sustainable. CETO Wave Energy Ireland is a wholly owned subsidiary of Carnegie Clean Energy. Carnegie is the owner and developer of the CETO® and MoorPower™ technologies, which capture energy from ocean waves and convert it into electricity. Using the latest advances in artificial intelligence and electric machines, Carnegie can optimally control our technologies and generate electricity in the most efficient way possible. The Wave Predictor technology developed by Carnegie uses a proprietary machine learning algorithm to improve the performance of our wave technologies and has additional applications beyond the wave energy industry. The company has a long history in ocean energy with a track record of world leading developments.

https://www.carnegiece.com/

EUROPEWAVE

ACHIEVE

Advanced CETO for High Impact and Efficiency Validation in Europe

Miguel Santos-Herran

Project Manager

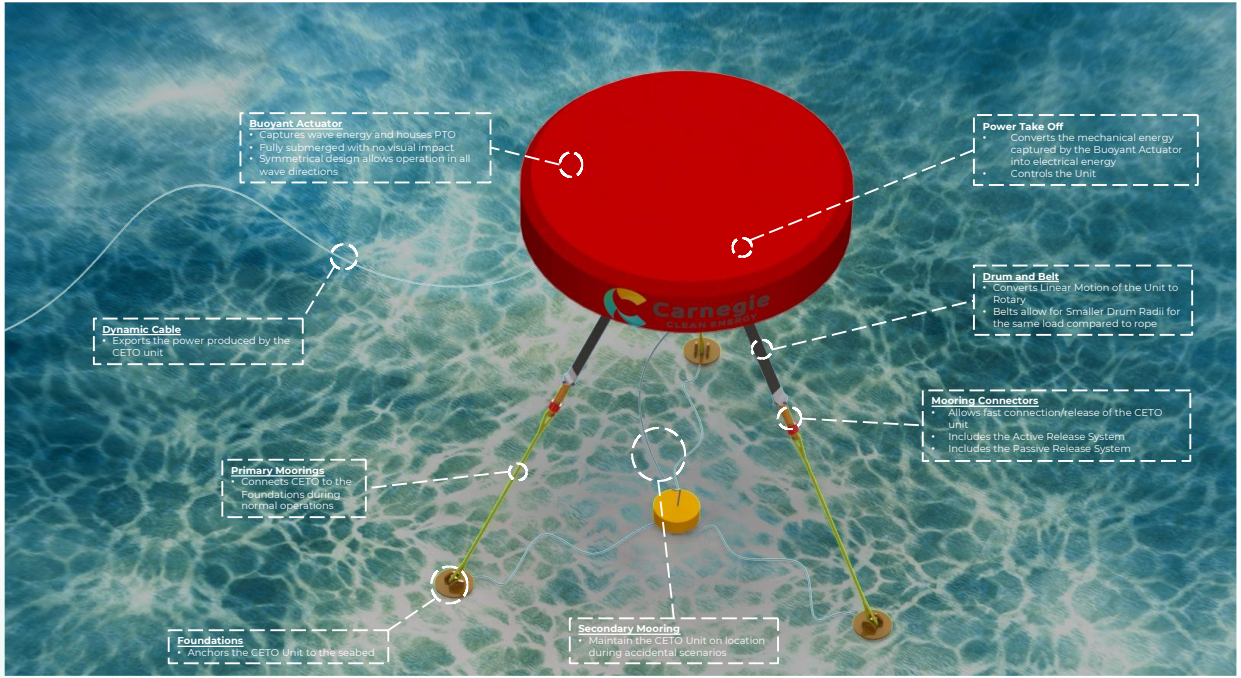
CETO Wave Energy Ireland

CETO
WAVE ENERGY IRELAND

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement 883751.

CETO Technology – Key Features

- Point Absorber
- Axisymmetric
- Submerged
- Multi-moored
- Scalable
- Adapts to various depths
- Optimised for lowest LCOE
- Survivability



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CETO
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CETO Technology – Key Features

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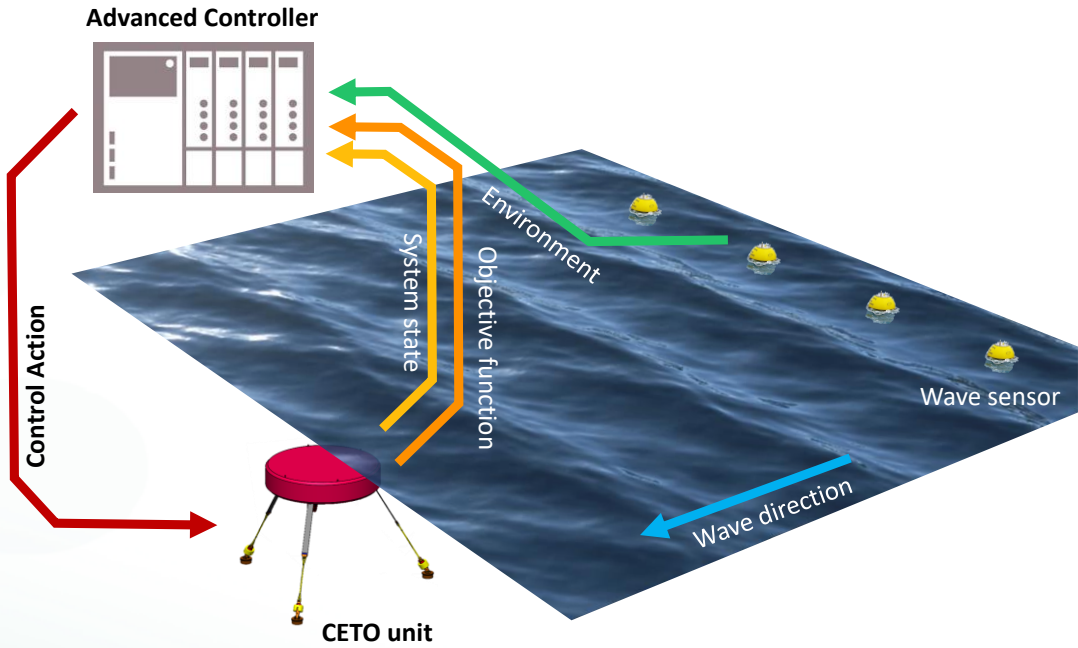
CETO Technology – Key Innovations

Advanced Controller

- Reinforcement Learning (RL) and Model Predictive Control (MPC) developed for CETO
- Includes wave predictor developed by Carnegie and tested at IHC
- Yield >20% compared to passive controller
- Controller to be physically tested during Phase 2 tank campaign



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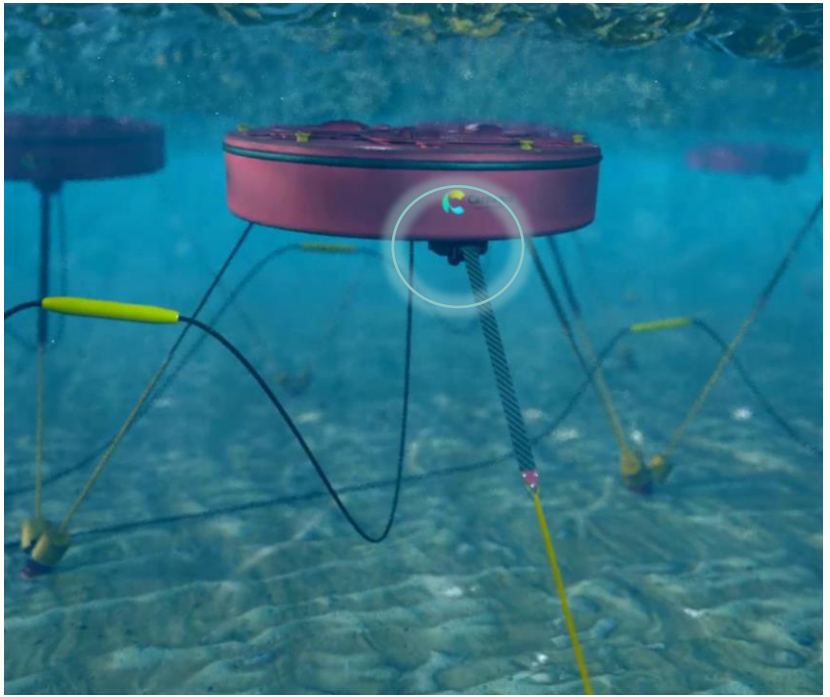
CETO Technology – Key Innovations

Rotary Electric PTO

- Belt wraps on a drum driving mooring tensioner and electrical drive train
- Allows direct control of the force applied in each mooring enabling advanced controllers
- Offers direct energy conversion, leading to excellent efficiencies
- Simpler system with low part count for improved reliability
- Benefits from cost reductions achieved for electrical drive trains in other industries (offshore wind, EVs)
- Can easily accommodate large motions avoiding to design for end of stroke loads



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CETO Technology - Key target applications

Remote & Islands

Demand Applications

High electricity tariff
High carbon (diesel) intensity and hard to abate
Potential value for additional benefits
Limited space/land availability
Hybrid systems

Utility Scale

Low electricity tariff
Highly competitive
Enormous market size

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CETO WAVE ENERGY IRELAND

Phase 1 - Outline of activities and Project Team

		WP 1 Project Mngt	WP2 Concept Design	WP3 Num. Model Validation	WP4 Tank Testing	WP5 Operational Planning	WP6 Technology Roadmap	WP7 Financial Modelling	WP8 Certification Pathway
Consortium Members	CETO WAVE ENERGY IRELAND	**Leading**	**Leading**	Supporting	Supporting	**Leading**	Supporting	Supporting	Supporting
	saitec offshore technologies	Supporting	Supporting			Supporting	Supporting		
Subcontractors	YAVIN FOUR CONSULTANTS		Supporting	**Leading**			**Leading**		
	DNV								**Leading**
	IH cantabria INSTITUTO DE HIDRÁULICA AMBIENTAL UNIVERSIDAD DE CANTABRIA				**Leading**				
	JULIA F. CHOZAS CONSULTING ENGINEER							**Leading**	

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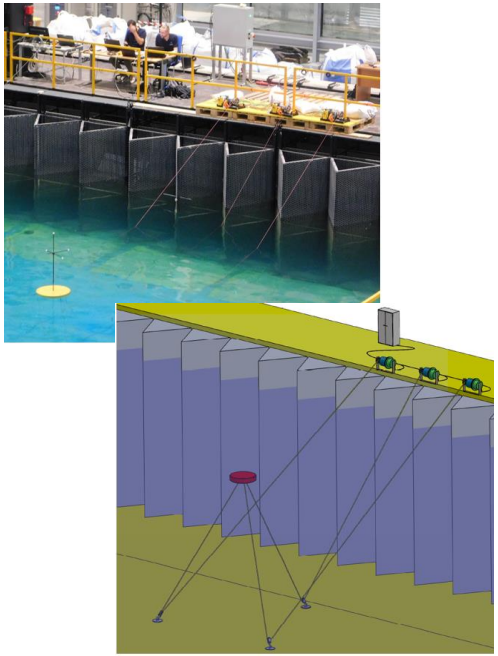
Phase 1 learnings

- Solid project base established with a thorough **Basis of Design**
- **System Architecture** suitable for **BiMEP** and **EMEC**
- Effective **mitigations for yaw** instability uncovered during phase 1
- Advanced controller fixed, ready to demonstrate **superior performance in tank**.
- Extra **preparation effort in tank** testing in Phase 1 to be helpful in reducing testing time for Phase 2



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Phase 1 learnings

- Excellent progress on **Components Design**, supplier engagement ramping up in phase 2
- Unique **Survival Strategy**, solving fundamental WEC challenge: peak/average
- **Validated Numerical Models** used to confirm **Performance**
- Clear **O&M plans** based on extensive operational expertise
- **System Engineering** and Project management best practices endorsed by **Classification Society**

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	VGA		Supporting			Supporting			
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Phase 2 objectives

- Completion of **FEED** for all main subsystems
- Validation of the **refined numerical models**
- Successful **testing of the advanced controls** in tank
- Successful testing of **survivability** capabilities in tank
- Successful testing of the **PTO** (Mooring Tensioner, belt, …)
- Refining of marine operation plans
- Refining of techno-economic assessment
- Update FMECA and technology and **risk** registers
- Independent **third-party validation** of the technology analysis
- Progress along the **certification pathway**

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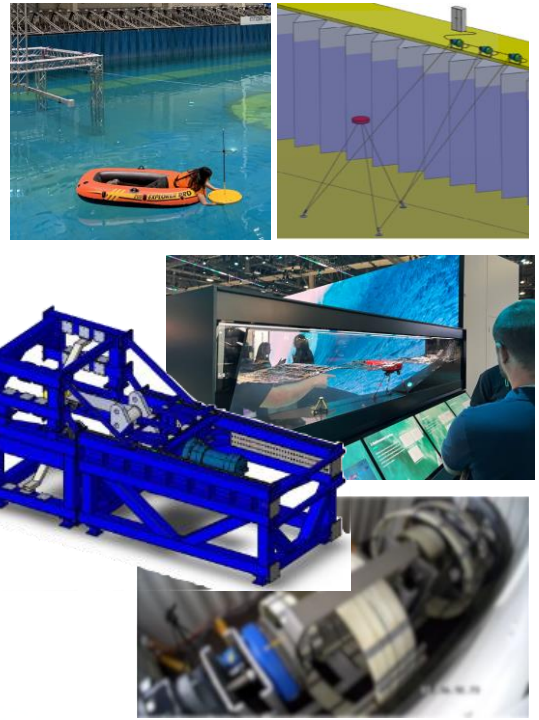
Phase 2 most relevant progress

- Progressed on the **FEED**: BA update, Mooring Connector, secondary mooring, …
- **Improved system architecture and control** have overcome potential yawing issues
- Good progress on **RL implementation** by HPE
- **Tank testing** in progress at IHC (controls + survivability)
- **PTO testing**: parallel Mooring Tensioner testing; engagement with VGA for the belt testing set-up; Hutchinson for fatigue characterisation
- Incorporating a new electrical engineer to the Project team



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