

BOARD OF DIRECTORS & CEO

Non-Executive Chairman
Terry Stinson

Non-Executive Director
Grant Mooney

Non-Executive Director
Michael Fitzpatrick

Non-Executive Director
Anthony Shields

Chief Executive Officer
Jonathan Fievez

CONTACT DETAILS

www.carnegiece.com

enquiries@carnegiece.com

+61 8 6168 8400

21 North Mole Drive
North Fremantle WA 6159

PO Box 39
North Fremantle WA 6159

QUARTER HIGHLIGHTS

- Significant progress made on phase 2 of the EuropeWave PCP Programme (contract value €600k / A\$890k), integrating new design features and furthering CETO commercialisation
- EuropeWave Phase 2 testing – wave tank testing in Spain successfully completed and power take-off (PTO) testing in Italy to commence soon
- The EuropeWave contract continues as a strong validation of CETO's commercial potential and offers an opportunity for the deployment of CETO in Phase 3 at a renowned European site, subject to competitive selection
- Carnegie's Mooring Tensioner (MoTWEC) project reaches testing milestone with over 250,000 cycles on the test rig
- Continued collaboration with world-class partners – Hewlett Packard Enterprise, Blue Economy CRC, Huon, Tassal, Hutchinson and more

Carnegie's CEO, Mr Jonathan Fiévez, commented on the Quarter:

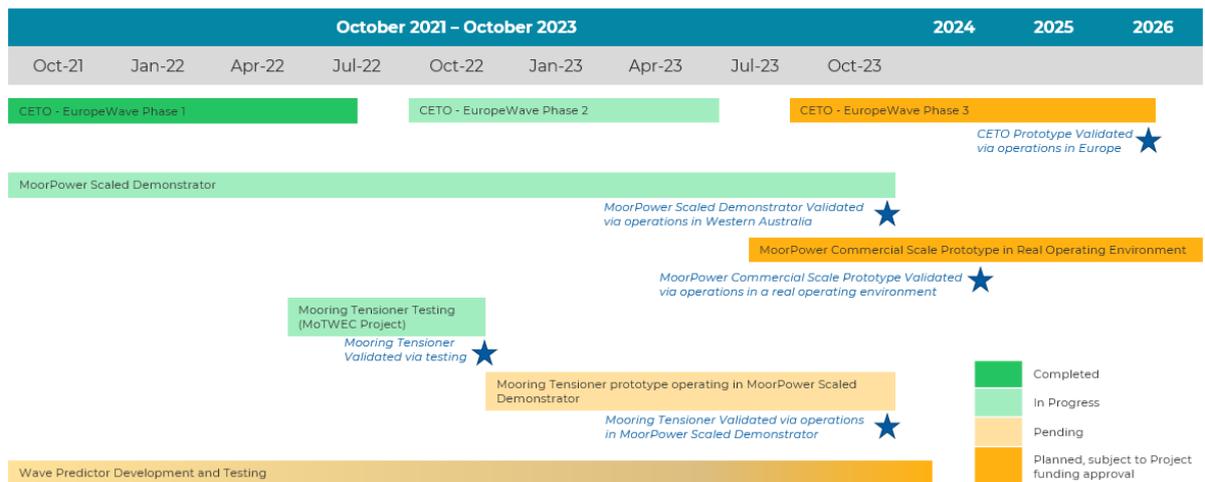
"This quarter we had three of our key projects approaching significant milestones with EuropeWave tank testing in Spain completing successfully; the MoorPower prototype taking shape with assembly commencing; and the Mooring Tensioner test rig completing cycles equivalent to more than one year of operation. This is a testament to the diligent work of the team, including our growing group of European personnel. Particularly exciting was the successful operation of the reinforcement learning (RL) controller in our tank testing – probably the first time ever that anyone has used RL in wave energy testing.

The good progress is being noticed by important industry and commercial groups which are likely to be part of our commercial rollout. We look forward to next quarter with the completion of EuropeWave Phase 2 and the deployment of the MoorPower Scaled Demonstrator"

<p>Who is Carnegie?</p>	<p>Carnegie develops ocean energy technologies to make the world more sustainable. The Company provides commercially competitive technologies to enable the capture of wave energy to make electricity. Waves are an untapped energy source that is consistent, predictable, and globally distributed and can be converted into clean, renewable electricity. The scale of the opportunity is significant, Ocean Energy Europe (OEE) forecasts significant growth for wave energy with a €653b market potential by 2050.</p>
--------------------------------	--

PRODUCTS

Carnegie is successfully progressing its Product Validation Roadmap (figure below), which defines the activities to be progressed over the next 18+ months and beyond to validate Carnegie’s products and their commercial readiness. Supported by strategic partnerships and a strong financial position, the Roadmap builds on achievements of the previous Digital Development Pathway to advance commercialisation goals.



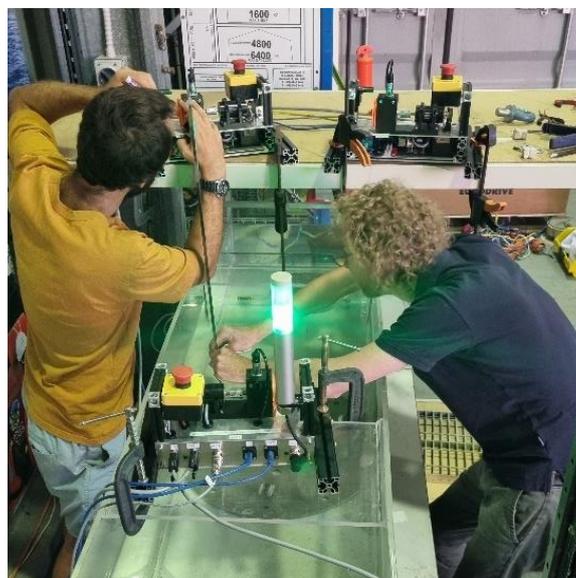
CETO

Named after a Greek sea goddess, Carnegie’s core technology CETO is a submerged buoy that sits a few metres below the ocean, converting ocean waves into zero-emission electricity. The technology harnesses the extensive untapped energy resource of ocean waves providing reliable, predictable energy supply. Carnegie is continually advancing its technology to facilitate uptake through cost reduction and increased energy supply capacity.

Advancements are being achieved through CETO Wave Energy Ireland's (CWEI) participation in the EuropeWave Pre-Commercial Procurement (PCP) programme, a €22.5m EU-funded programme to advance wave energy technologies for commercial uptake, running as a phased programme from 2021 to 2025.

As 1 of 5 contractors who advanced to Phase 2 of the programme, CETO Wave Energy Ireland is progressing by utilising awarded funds of €600k (A\$890k) to complete Front End Engineering Design (FEED), Power take-off (PTO) testing and related commercialisation activities.

During the quarter, the CETO Wave Energy Ireland team completed dry testing and preliminary validation of scaled CETO models in preparation for tank testing. As a major component of Phase 2 activities, the team went on to successfully complete tank testing in the Cantabria Coastal and Ocean Basin (CCOB) in Spain. This vital testing further validates the performance and behaviour of CETO in a physical environment, with a particular focus on advance controller performance and extreme sea survival.



Engineers assembling and testing the models in advance of Phase 2 wave tank testing campaign in Spain.

Through the recently extended 2-year collaboration agreement with HPE, the Reinforcement Learning based CETO controller was successfully tested during the Phase 2 tank testing, supporting validation of this innovative controller. Reinforcement learning is an area of artificial intelligence (AI) in which a machine learning based controller is built with the ability to self-learn. This advanced controller has significant potential to improve the efficiency of the device and provide additional safety in extreme seas. Phase 2 testing also validated the survivability of CETO in extreme conditions by testing novel survivability approaches that can significantly reduce CAPEX.



EuropeWave PCP Phase 2 tank testing at the Cantabria Coastal Ocean Basin in Spain in March

The power take-off testing will also take place in Italy in mid-2023 with support from Carnegie's EuropeWave engineering partners. VGA is providing support and access to new test rigs developed through the European funded IMPACT project and Hutchinson is undertaking some detailed belt testing and supplying belts for the full-scale PTO test campaign.

After the completion of EuropeWave Phase 2, 3 of the 5 contractors will be awarded contracts to deliver Phase 3 of the EuropeWave Programme. If selected, this final Phase would see the deployment of CETO at the open-water facilities of the Biscay Marine Energy Platform (BiMEP) in the Basque Country or the European Marine Energy Centre (EMEC) in Scotland. This is an exciting step in CETO's product validation roadmap and fully aligns with the Company's objectives to pave the way for a commercial CETO roll-out and attract future project partners.

Technology developers retain ownership of intellectual property rights (IPRs) generated during the EuropeWave Programme, and so the Company will be able to use the IP to exploit the full market potential of the CETO technology following the EuropeWave Programme.

MoorPower

Carnegie’s CETO-derived MoorPower Scaled Demonstrator continues to advance. The \$3.4M project is designed to provide offshore energy solutions and deliver sustainable energy supply for vessels moored offshore, such as barges in the aquaculture sector, reducing reliance on diesel. This Project, in collaboration with the Blue Economy Cooperative Research Centre (BECRC) is scheduled for offshore deployment in the second quarter of 2023.

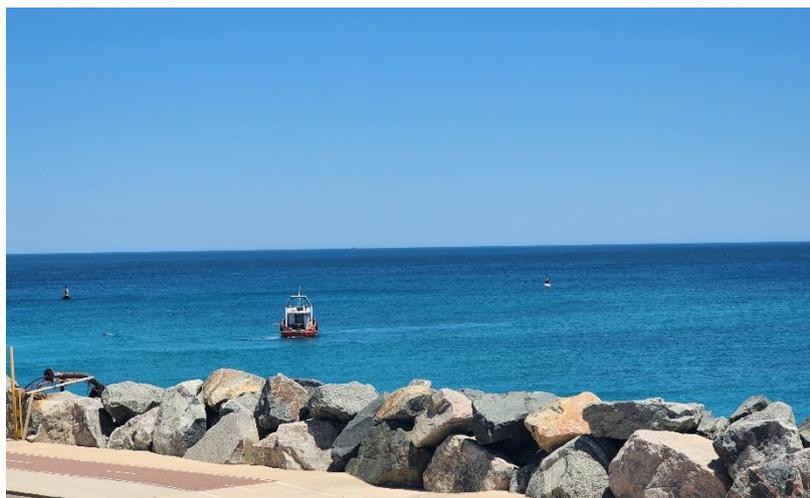


During the quarter, the Company continued progress on the fit-out of the previously acquired barge for MoorPower deployment. In conjunction with works on the offshore



procurement, assembly and manufacture is currently underway, with onshore

testing and deployment scheduled for Q2 at Carnegie’s offshore testing site in North Fremantle, Western Australia. Aquaculture specialists in Australia and partner Blue Economy CRC members Huon Aquaculture and Tassal Group are supporting the initiative and have the opportunity to be the initial adopters of the MoorPower™ commercial product.



Carnegie’s offshore testing site undergoing preparatory works at the North Fremantle Research Facility

Complimentary Products

Fatigue testing of the BECRC supported Mooring Tensioner for Wave Energy Converters (MoTWEC) is underway at the onshore testing facility in North Fremantle. During this quarter the project reached a testing milestone with over 250,000 cycles completed. This represents a significant achievement for the team with testing to continue through the coming quarter.

This complimentary product provides passive tension for core technology CETO and MoorPower products to increase resilience and increase energy output. Fatigue testing is ongoing and will lead to design and integration of the prototype into the power take-off units of both MoorPower and CETO during the EuropeWave PCP Programme.

EVENTS

Carnegie presented at several events during the Quarter, CEO Jonathan Fievez attended the Ocean Business Leaders' Summit in Sydney, Australia. To discuss the scaling up of Ocean Energy solutions to meet decarbonisation targets and economic development, both in Australia and Globally.

Carnegie's CEO also attended AOG Energy in Perth, WA to discuss opportunities and challenges for ocean renewable energy. Highlighting the value of CETO and wave energy in the renewable energy transition.



Carnegie's CEO Jonathan Fievez presented at Ocean Leaders Summit Panel (left - Yve Lavine Photography) and presented on opportunities and challenges in ocean renewable energy at AOG Energy Perth (right).

CETO Wave Energy Ireland Project Manager Miguel Santos-Herran presented at the second annual EuropeWave Conference in Brussels, Belgium. Lessons learned from Phase 1 of the project were presented, alongside progress made through phase 2 to date.

Miguel was also invited to present at SPIREC (International Renewable Energy Conference – Spain). Profiling “The critical role of marine energy in the sustainable energy transition.” Increasing visibility of the ocean energy sector and the role of CETO wave energy technology in the renewable energy mix.



Miguel Santos-Herran presenting at the Annual EuropeWave Conference (left) and Miguel from CWEI alongside delegates at SPIREC (right)

Hewlett Packard Enterprise

CETO technology made an appearance at the 2023 LEAP conference in Saudi Arabia via Carnegie Clean Energy’s partnership with Hewlett Packard Enterprise. Showcasing significant advancements in the collaboration to create a Reinforcement learning-based controller for CETO. As part of the collaboration, HPE showcased their commissioned wave tank to thousands of attendees and VIP delegates.



HPE interactive wave tank on display at the LEAP 2023 Conference in Saudi Arabia

FINANCIAL NOTES

At the end of the Quarter, Carnegie had approximately \$2.86m in cash reserves. Careful management of company funds and assets continues so that progress is made with highly efficient use of capital. The Company remains debt free and in a solid position financially.

Note 6 to Appendix 4C:

Payments to related parties of the entity and their associates were made during the Quarter. In total, approximately \$87k was paid to Directors and associates for salaries, superannuation and contracted services.

This announcement has been authorised by the Chairman and Company Secretary.

For more information

Carnegie Clean Energy Limited
+61 8 6168 8400
enquiries@carnegiece.com
www.carnegiece.com

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/>

ABOUT EUROPEWAVE PRE-COMMERCIAL PROCUREMENT PROGRAMME



EuropeWave PCP is an innovative R&D programme for wave energy technology, which runs from 2022 to 2026. It will combine over €22.5m of national, regional and EU funding to drive a competitive Pre-Commercial Procurement (PCP) programme for wave energy.

Originally pioneered by the Wave Energy Scotland programme, the PCP model provides a structured approach, fostering greater openness, collaboration and sharing of risk between the public sector and technology developers. The programme will focus on the design, development, and demonstration of cost-effective wave energy converter (WEC) systems for electrical power production that can survive in the harsh ocean environment.

Match-funded by the EU's Horizon 2020 programme, it is a collaboration between Wave Energy Scotland (WES), the Basque Energy Agency (EVE) and Ocean Energy Europe (OEE). This collaboration

is closely aligned with the decarbonisation, industrial and competitiveness objectives of the European Green Deal, and is part of a range of actions being taken to meet the European Commission’s targets of 100MW of ocean energy by 2025 and at least 1GW by 2030.

The 3 Phases of the Europe Wave PCP:

	Start date	End Date	Number of Contracts		Contract Maximum Value	
			Minimum	Anticipated	ex. VAT	inc. VAT
Phase 1 Concept Development	03 Jan 2022	29 July 2022	5	7	€ 291,667	€ 350,000
Phase 2 FEED and Modelling	26 Sept 2022	30 June 2023	4	5	€ 608,333	€ 730,000
Phase 3 Open- water deployment]	11 Sept 2023	29 May 2026	3	3	€ 3,750,000	€ 4,500,000
				Totals	€ 4,650,000	€ 5,580,000



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/>

Appendix 4C

Quarterly cash flow report for entities subject to Listing Rule 4.7B

Name of entity

CARNEGIE CLEAN ENERGY LIMITED

ABN

69 009 237 736

Quarter ended ("current quarter")

31 March 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (9 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	111	1,072
1.2 Payments for		
(a) research and development		
(b) product manufacturing and operating costs	(161)	(503)
(c) advertising and marketing		
(d) leased assets	(23)	(62)
(e) staff costs	(505)	(1,462)
(f) administration and corporate costs	(290)	(754)
1.3 Dividends received (see note 3)		
1.4 Interest received	13	33
1.5 Interest and other costs of finance paid		
1.6 Income taxes paid		
1.7 Government grants and tax incentives		
1.8 Other (Return of funds under deposit)	15	15
1.9 Net cash from / (used in) operating activities	(840)	(1,661)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment		
(d) investments		
(e) intellectual property	(7)	(16)
(f) other non-current assets	(199)	(464)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
2.2	Proceeds from disposal of:		
	(a) entities		
	(b) businesses		
	(c) property, plant and equipment		
	(d) investments		
	(e) intellectual property		
	(f) other non-current assets		
2.3	Cash flows from loans to other entities		
2.4	Dividends received (see note 3)		
2.5	Other (Net insurance less payments to replace damage)	78	78
2.6	Net cash from / (used in) investing activities	(128)	(402)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)		
3.2	Proceeds from issue of convertible debt securities		
3.3	Proceeds from exercise of options	-	810
3.4	Transaction costs related to issues of equity securities or convertible debt securities		
3.5	Proceeds from borrowings		
3.6	Repayment of borrowings		
3.7	Transaction costs related to loans and borrowings		
3.8	Dividends paid		
3.9	Other (provide details if material)		
3.10	Net cash from / (used in) financing activities	-	810

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	3,823	4,095
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(840)	(1,661)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(128)	(402)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	810
4.5	Effect of movement in exchange rates on cash held	10	24
4.6	Cash and cash equivalents at end of period	2,865	2,865

5.	Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1	Bank balances	865	1,323
5.2	Call deposits	2,000	2,500
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,865	3,823

6.	Payments to related parties of the entity and their associates	Current quarter \$A'000
6.1	Aggregate amount of payments to related parties and their associates included in item 1	(87)
6.2	Aggregate amount of payments to related parties and their associates included in item 2	
<i>Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.</i>		

Quarterly cash flow report for entities subject to Listing Rule 4.7B

7. Financing facilities	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
<i>Note: the term "facility" includes all forms of financing arrangements available to the entity.</i>		
<i>Add notes as necessary for an understanding of the sources of finance available to the entity.</i>		
7.1 Loan facilities	-	-
7.2 Credit standby arrangements	-	-
7.3 Other (please specify)	-	-
7.4 Total financing facilities	-	-
7.5 Unused financing facilities available at quarter end	-	
7.6 Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8. Estimated cash available for future operating activities	\$A'000
8.1 Net cash from / (used in) operating activities (item 1.9)	(840)
8.2 Cash and cash equivalents at quarter end (item 4.6)	2,865
8.3 Unused finance facilities available at quarter end (item 7.5)	-
8.4 Total available funding (item 8.2 + item 8.3)	2,865
8.5 Estimated quarters of funding available (item 8.4 divided by item 8.1)	3.4 quarters
<i>Note: if the entity has reported positive net operating cash flows in item 1.9, answer item 8.5 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.5.</i>	
8.6 If item 8.5 is less than 2 quarters, please provide answers to the following questions:	
8.6.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?	
Answer:	
8.6.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?	
Answer:	
8.6.3 Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?	
Answer:	
<i>Note: where item 8.5 is less than 2 quarters, all of questions 8.6.1, 8.6.2 and 8.6.3 above must be answered.</i>	

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.

Date: 28 April 2023

Authorised by: By Board of Directors
(Name of body or officer authorising release – see note 4)

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standard applies to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [name of board committee – eg Audit and Risk Committee]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.