

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

- Submission and payment of EuropeWave Phase 2 Deliverables
- Submission of tender for Phase 3 EuropeWave contract, offering an opportunity for the deployment of CETO in Phase 3 at a renowned European site, subject to competitive selection
- Participation in EuropeWave serves as a strong validation of CETO's commercial potential
- Onshore tests underway of the power take-off (PTO) units for the MoorPower Scaled Demonstrator, in advance of deployment
- Mooring Tensioner (MoTWEC) project reaches testing milestone with over half a million cycles on the test rig, the equivalent of 2 years of deployment

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

The EuropeWave Phase 2 submission was a major undertaking and a credit to the team to deliver such a high-quality package of information. Over 1,000 pages were generated to describe everything from tank testing to preliminary design to risk assessment.

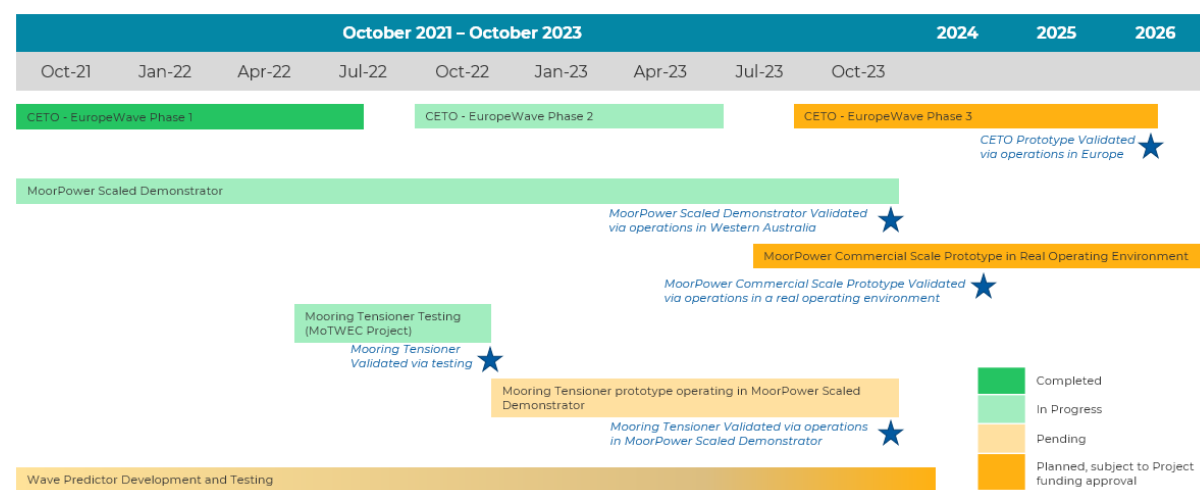
Supported by this work, the Phase 3 submission was equally comprehensive and I believe presents a compelling case to the EuropeWave Buyers Group to support our bid. A CETO deployment in Europe would be a major step toward commercialisation in a part of the world crying out for locally sourced energy, especially in winter when the waves are most energetic but the solar resource is limited.

MoorPower onshore testing is underway and offshore deployment is coming soon. There is enormous value in physical demonstration to future customers and investors alike, not to mention the acceleration in technical understanding and shared learnings with CETO.

Who is Carnegie?		<p>Carnegie develops ocean energy technologies to make the world more sustainable. We provide advanced and competitive wave energy products for global renewable energy markets.</p> <p>Waves are an untapped renewable energy source that is consistent, predictable, and globally distributed. 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>
Core Products	CETO	<p>CETO is a submerged buoy harnessing energy from ocean waves. Sitting a few meters below the surface of the ocean, CETO converts wave energy into zero-emission electricity. This clean and predictable energy supply can be harnessed to provide a reliable energy source 24/7. The CETO technology is continually improving through cost reduction measures and increasing the energy supply capacity intelligent innovation.</p>
	MoorPower	<p>MoorPower is a wave energy product for offshore demand applications. A spin-off from the CETO technology, MoorPower provides power for offshore moored vessels, such as feed and lighting barges used in Aquaculture. MoorPower can replace and reduce diesel generator usage in offshore environments, reducing risk and carbon emissions.</p>

PRODUCTS

The Quarter saw Carnegie progress its technologies along the Product Validation Roadmap previously announced and detailed below. This roadmap outlines key activities in the coming years in relation to project activities to validate and progress our technologies towards commercialisation. The projects are supported by careful financial management and strategic partnerships to advance the commercialisation goals of the Company.



CETO

CETO validation activities have progressed during the quarter through the involvement of CETO Wave Energy Ireland (CWEI) in the EuropeWave Pre-Commercial Procurement (PCP) initiative. This program, funded with €22.5 million from the European Union and the EuropeWave Buyers Group, aims to drive the development of wave energy technologies for commercial use. Spanning from 2021 to 2026, the program operates in multiple phases.



During phase 2 of the program, CETO Wave Energy Ireland completed Front End Engineering Design (FEED), testing, certification and commercialisation activities. These activities support progress of the commercialisation pathway of the CETO technology. Phase 2 testing validated the survivability of CETO in extreme conditions by testing novel survivability approaches that can significantly reduce CAPEX.



Through the partnership with HPE, the Reinforcement learning controller designed for CETO was successfully tested during Phase 2, this artificial intelligence (AI) based controller uses machine learning to improve the efficiency of energy capture of the CETO unit, as well as providing additional safety in harsh seas during storm events, greatly reducing the risk to the device.



Analysis of live Phase 2 tank testing data in Cantabria Spain.

Following the successful tank testing campaign in the March quarter, the team at CETO Wave Energy Ireland have been analysing and the results which yielded good correlation with simulations. Reporting and deliverables of the Phase 2 of EuropeWave were submitted, with feedback positive feedback received and approximately €550k of Phase 2 contract payments received to date.

Following the Phase 2 submission, CWEI submitted its tender for a Phase 3 contract. Following review by the EuropeWave selection panel, Phase 3 contract award announcements are expected in August

2023. Three of the initial five contractors will be awarded contracts to proceed to Phase 3 of the EuropeWave Program. Should CETO be selected, this final phase will involve deploying the technology at either the Biscay Marine Energy Platform (BiMEP) in the Basque Country or the European Marine Energy Centre (EMEC) in Scotland, both renowned open-water facilities. The Phase 3 deployment would represent an exciting leap forward in CETO's commercialisation pathway and is strategically aligned with the Company's objectives of establishing a commercial CETO roll-out and attracting future project partners.

In line with the team's approach to de-risking the technology through testing in advance of deployment, further testing of the power take-off units is ongoing with upcoming tests to be undertaken with the IMPACT project. VGA are providing support and access to new test rigs developed through the European funded IMPACT project.

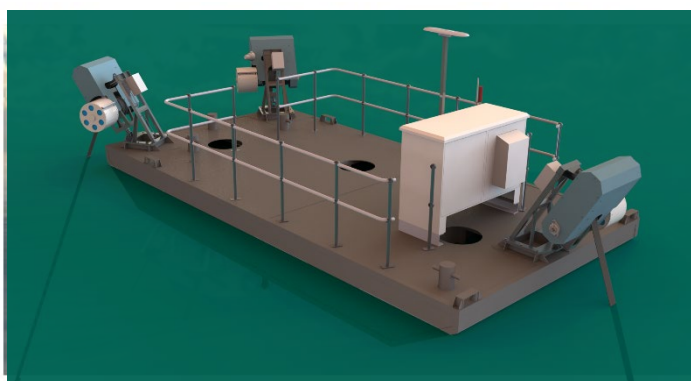
Throughout this process, EuropeWave participants retain the Intellectual property rights (IPR's) generated throughout the programme. This allows the Company to exploit the full potential of the technology derived through the programme.

MoorPower

Onshore testing of the power take-off units for the MoorPower scaled demonstrator is underway. The units are currently undergoing back-to-back testing prior to being installed on a barge and deployed at Carnegie's offshore test site in Fremantle, Western Australia.

The MoorPower Scaled Demonstrator project has been developed in conjunction with the Blue Economy CRC (BE CRC) and associated project partners. Offshore deployment of the barge and mounted MoorPower units is expected within the next quarter.

During the Quarter, project partners were invited to view the progress of the barge preparations and MoorPower unit testing. This allowed project partners Huon Aquaculture and Tassal Group - potential first adopters of the technology, to view the progress of the project and continue discussions around the future commercial deployment of the MoorPower technology as a solution to their clean energy supply requirements.





MoorPower PTO testing discussions with Project partners from Huon Aquaculture and Blue Economy CRC

Complimentary Products

Cycles of the BE CRC supported Mooring Tensioner for Wave Energy Converters (MoTWEC) continue with a milestone of half a million cycles achieved, equivalent to 2 years' deployment. Testing will continue over the coming months to further validate the mooring tensioner technology and support the commercialisation of wave energy technologies.

Applications of this technology both advance the Carnegie core technology CETO and MoorPower by providing passive tension to the unit. This testing will be further validated by integration of the technology into the MoorPower units when deployed in Fremantle. The tensioner technology will also be integrated into the CETO scaled deployment during the EuropeWave PCP program, subject to contract award.

EVENTS

Carnegie representatives attended the Annual Blue Economy CRC Participants Workshop in Fremantle, with CCO Brigid Jay presenting on *A blueprint for sustainable open ocean aquaculture acreage*, CEO Jonathan Fievez presenting on *First Nations, government policy and renewable energy* as well as a second session about *Decarbonising blue economy industries*. CTO Alexandre Pichard presented on the topic of *Harnessing Ocean energy for ocean and coastal industries and communities*. The final day of the workshop gave delegates an opportunity to tour the Carnegie Research Facility and view the work being undertaken by Carnegie in development of CETO, MoorPower and the Mooring Tensioner.



Carnegie's CEO Jonathan Fiévez leading a BE CRC Participants tour at the Carnegie Research Facility

Carnegie's CTO Alexandre Pichard also attended OMAE 2023, the international Conference on Ocean, Offshore & Antarctic Engineering in Melbourne where he presented on opportunities within the Blue Economy, highlighting the MoorPower product, current project activities and future opportunities for commercialisation of the technology.



Carnegie's CTO Alexandre Pichard presenting at OMAE 2023 Melbourne.

FINANCIAL NOTES

At the end of the Quarter, Carnegie had approximately \$2m 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 \$73.5k 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 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")

30 June 2023

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (12 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	205	1,277
1.2 Payments for		
(a) research and development		
(b) product manufacturing and operating costs	(193)	(696)
(c) advertising and marketing		
(d) leased assets	(23)	(85)
(e) staff costs	(519)	(1,981)
(f) administration and corporate costs	(97)	(851)
1.3 Dividends received (see note 3)		
1.4 Interest received	14	47
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
1.9 Net cash from / (used in) operating activities	(613)	(2,274)
2. Cash flows from investing activities		
2.1 Payments to acquire or for:		
(a) entities		
(b) businesses		
(c) property, plant and equipment	(28)	(28)
(d) investments		
(e) intellectual property	(25)	(41)
(f) other non-current assets	(149)	(613)

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (12 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)	(22)	56
2.6	Net cash from / (used in) investing activities	(224)	(626)

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	2,863	4,095
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(613)	(2,274)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(224)	(626)
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	7	28
4.6	Cash and cash equivalents at end of period	2,033	2,033

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	833	865
5.2	Call deposits	1,200	2,000
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)	2,033	2,865

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	(73)
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>		

7.	Financing facilities <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>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
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 <div style="border: 1px solid black; height: 20px; width: 100%; margin-top: 5px;"></div>		
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)	(613)
8.2	Cash and cash equivalents at quarter end (item 4.6)	2,033
8.3	Unused finance facilities available at quarter end (item 7.5)	-
8.4	Total available funding (item 8.2 + item 8.3)	2,033
8.5	Estimated quarters of funding available (item 8.4 divided by item 8.1)	<div style="border: 1px solid black; padding: 5px; width: 100%;">3.3 quarters</div>
	<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 July 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.