Carnegie
CLEAN ENERGY

ANNUAL REPORT 2024

We harness ocean energy to make the world more sustainable

Corporate Directory

Board of Directors

Terry Stinson	Non-Executive Chairman
Michael Fitzpatrick	Non-Executive Director
Grant Mooney	Non-Executive Director
Anthony Shields	Non-Executive Director

Chief Executive Officer

Jonathan Fiévez

Company Secretary

Grant Mooney

Registered Office Address

21 North Mole Drive
North Fremantle WA 6159

Postal Address

PO Box 39
North Fremantle WA 6159

Telephone

(08) 6168 8400

Share Registry

Automic Group

GPO Box 5193
Sydney NSW 2001
1300 288 664 (within Australia)

Auditors

HLB Mann Judd
Level 4, 130 Stirling Street
Perth WA 6000

Website: www.carnegiece.com

ASX Code: CCE

OTCQB: CWGYF

Subsidiaries

CETO Wave Energy Ireland Limited

4th Floor, North Block, Rockfield Central
Dundrum DN 16, W7W3 Ireland

Carnegie Technologies Spain S.L.

Claudio Coello, 24 – 4A2
28001 Madrid, Spain

CETO Wave Energy UK Limited

5 South Gyle Crescent Lane
Edinburgh EH12 9EG, Scotland

Table of Contents

Letter From the Chairman 2024

I am pleased to present the Annual Report for Carnegie Clean Energy for the financial year ending 30 June 2024. The past year has been one of immense progress, marked by significant strategic accomplishments that maintain Carnegie's position as a leader in the rapidly evolving field of wave energy.

The impacts of climate change drive the critical need for clean, renewable energy solutions. At Carnegie Clean Energy, we are steadfast in our commitment to commercialising wave energy and playing a pivotal role in supporting the essential global energy transformation.

The past year has been a testament to the hard work, creativity, dedication and expertise of our team. The ACHIEVE Programme is moving CETO technology closer to commercial reality, thanks to the support of the EuropeWave Programme, the Basque Energy Agency, and the Spanish Government who are providing combined support of €7.05m ($11.66m) to facilitate development and demonstration of CETO in Europe. These funds, in addition to co-funding provided by the Company, will support the upcoming deployment of a scaled CETO prototype at the Biscay Marine Energy Platform (BiMEP) in 2025. The Company's co-funding will come via existing shareholder support raised in the 2024 Share Purchase Plan and will also include other financial mechanisms such as guarantees and loans which may be used to support cashflow during capital intensive periods, given the retrospective terms of several key milestone payments from various government backed funding sources.

The increasing support and engagement from regional, national and European governments represents a significant leap forward, not only for Carnegie but for the entire wave energy sector. It signals growing recognition of the value that wave energy can deliver to enable an affordable and just clean energy transition and helps accelerate our journey towards the growth and profitability that comes with commercialisation.

The ACHIEVE Programme is a crucial step on the CETO commercialisation pathway. This scaled demonstration of CETO technology is intended to validate the CETO technological advancements developed over recent years and deliver the technical and commercial due diligence required for future large scale projects with strategic partners. Additionally, a successful deployment and operation will help heighten the commercial interest in CETO through real time demonstration, thus attracting new commercial partners, and ultimately leading to a faster time-to-market and broader adoption of the technology.

In parallel, over the past year, our MoorPower technology has demonstrated remarkable potential to reshape offshore energy on barge type applications.

MoorPower uses the moorings of offshore moored vessels to capture energy from the waves in addition to keeping the vessel in place. This past year we witnessed the successful deployment, operation and validation of our MoorPower scaled demonstrator, made possible with support from the Blue Economy CRC and delivered in collaboration with partners and future aquaculture customers. The data collected has validated our core design principles and paved the way for commercial-scale deployment. The ability to provide clean, reliable energy to offshore aquaculture and other maritime industries represents a vast and untapped market opportunity, and with the success of the demonstrator, we are actively pursuing commercial-scale deployments on operating aquaculture barges.

Carnegie's pursuit of innovation extends beyond the technology deployment projects outlined above. Our global team is also actively participating in industry research programs such as MEGA Wave PTO and WECHULL+, collaborating with industry leaders and engaging with esteemed academic institutions. Working with our partner Hewlett Packard Enterprise, we are also bringing artificial intelligence to ocean energy, delivering results that can improve power and control of our CETO technology. The research projects we participate in continue to progress the core CETO technology towards commercialisation with near term improvements, while also supporting longer term improvements and innovations that will continue to drive future costs down.

As we look to the future, I continue to be optimistic. The wave energy industry is gaining momentum, with growing recognition of its role in achieving a sustainable energy mix. Carnegie, armed with innovative technologies, strategic partnerships, and our team of passionate individuals, is well positioned for success during the renewable energy transition. While the world has not yet reached the tipping point into large-scale industrialisation of wave energy, evidence of how wave energy can benefit our future clean energy grids is increasing, support is rising and confidence in commercial success is growing every year, and this was a big year.

I extend my deepest gratitude to our shareholders for their continued support. Your investment in Carnegie is an investment in a cleaner, greener future for generations to come. I also express my sincere appreciation to the Board of Directors, the management team, and every Carnegie employee for their tireless dedication and hard work.

Together, we are harnessing the boundless power of the ocean for a brighter and more sustainable tomorrow.

Terry Stinson
Non-Executive Chair

Company Overview

Carnegie Clean Energy is an industry leader in the wave energy sector.

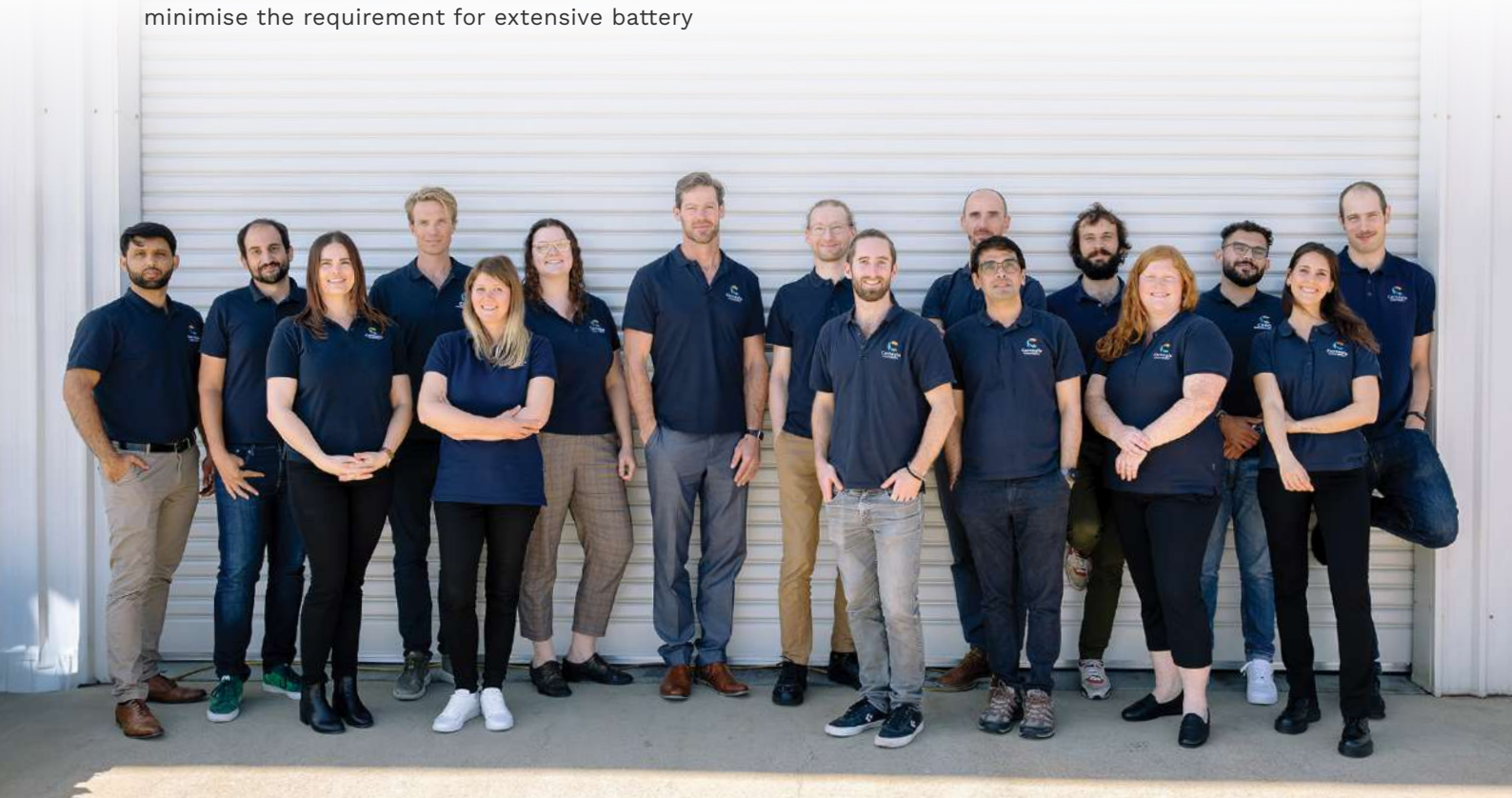
Offering a portfolio of cutting-edge wave energy technologies that harness the ocean's power to generate clean, reliable electricity.

Our CETO and MoorPower technologies cater to diverse energy requirements, with the potential to power a variety of markets, from large utility grids to remote communities and offshore aquaculture operations.

With a deep understanding of wave energy's potential, Carnegie continues to develop and deploy innovative solutions that support the world's transition to net zero. Our extensive experience spans the entire development spectrum, from modelling and simulations to large-scale commercial prototypes.

With a growing global energy demand and climate change impacts, new sustainable solutions are vital to augment already deployed technologies of solar and wind. Wave energy offers advantages because it provides a consistent, reliable and predictable energy source that is complementary to solar and wind energy. This positions wave energy as a key player in a renewable energy portfolio that can be delivered over the coming years. With its potential to stabilise the energy grid and minimise the requirement for extensive battery storage systems, the wave energy industry is poised for significant growth. Upcoming projects, including Carnegie's ACHIEVE Programme in the Basque Country, are set to validate the CETO technology, attract further investment and pave the way for widespread commercial deployment. Meanwhile, MoorPower projects in Australia are expanding wave energy's applications in the expanding offshore aquaculture sector.

Listed on the Australian Stock Exchange (ASX: CCE) and US OTCQB Market (OTCQB: CYGYF), Carnegie is an Australian company with a global footprint. Our team of world-class engineers, scientists, and professionals - driven by a shared passion for sustainability and renewable energy, are dedicated to harnessing the oceans energy to make the world more sustainable.



Global Context and Opportunity

Why Wave Energy?

Harnessing the immense energy of the oceans waves presents a reliable and consistent solution to the global energy challenge, offering a range of benefits that complement the existing renewable energy mix and enable the required expansion to meet our net zero targets.

The global wave energy resource is vast with estimates indicating a global potential exceeding 29,500TWh (Ocean Energy Europe). In order to understand this measurement, that 29,500 TWh is roughly equivalent to the global total electricity consumption in 2023 according to the International Energy Agency. This untapped resource provides a reliable and consistent source of power, particularly in coastal regions where wave energy is most concentrated. Unlike solar and wind which depend on specific weather conditions, waves are generated continuously by wind blowing over the ocean's surface. This predictability makes wave energy an attractive option for power generation, providing a stable foundation for both grid and offshore energy generation.

Wave Power Resource for Selected Countries

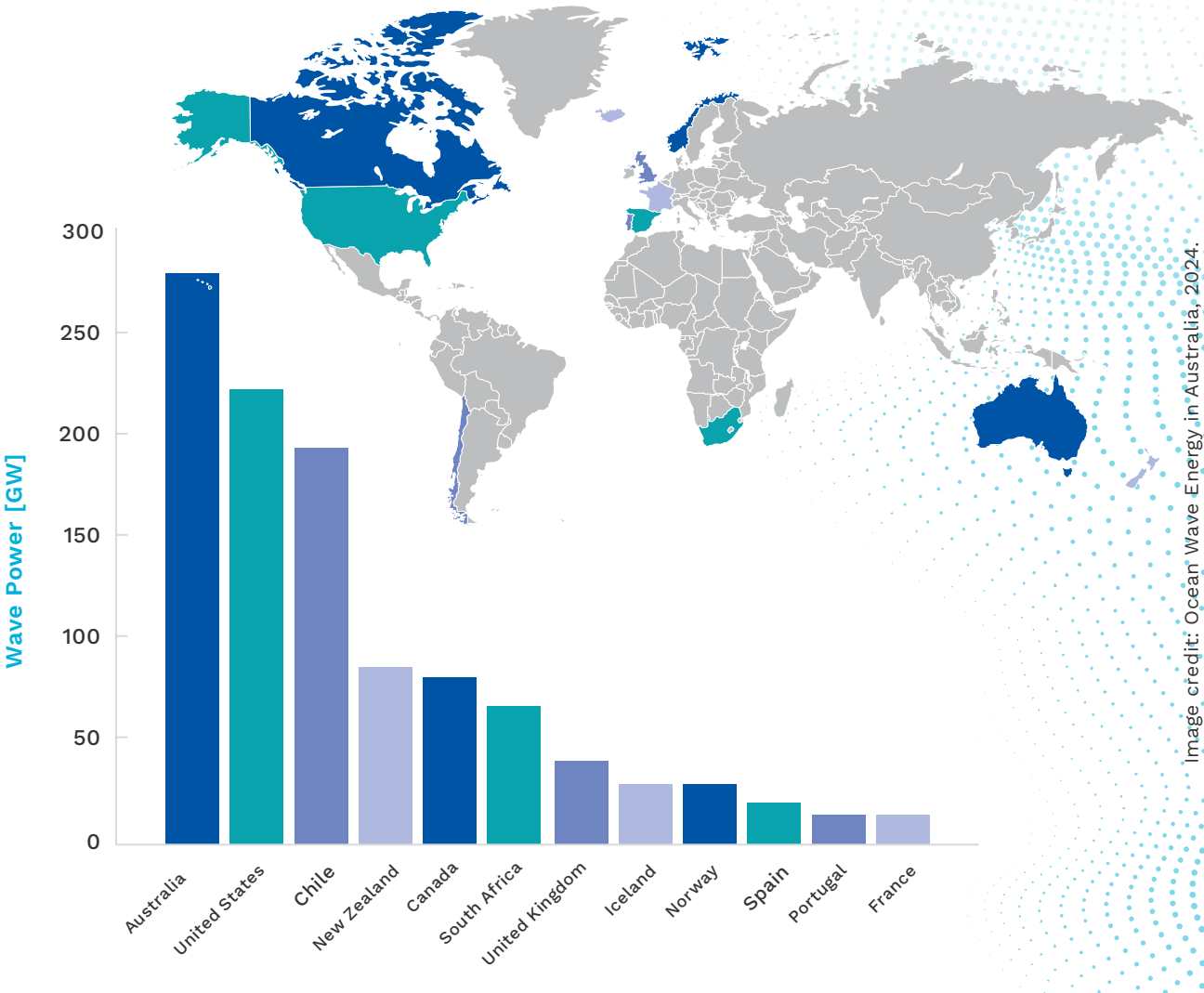
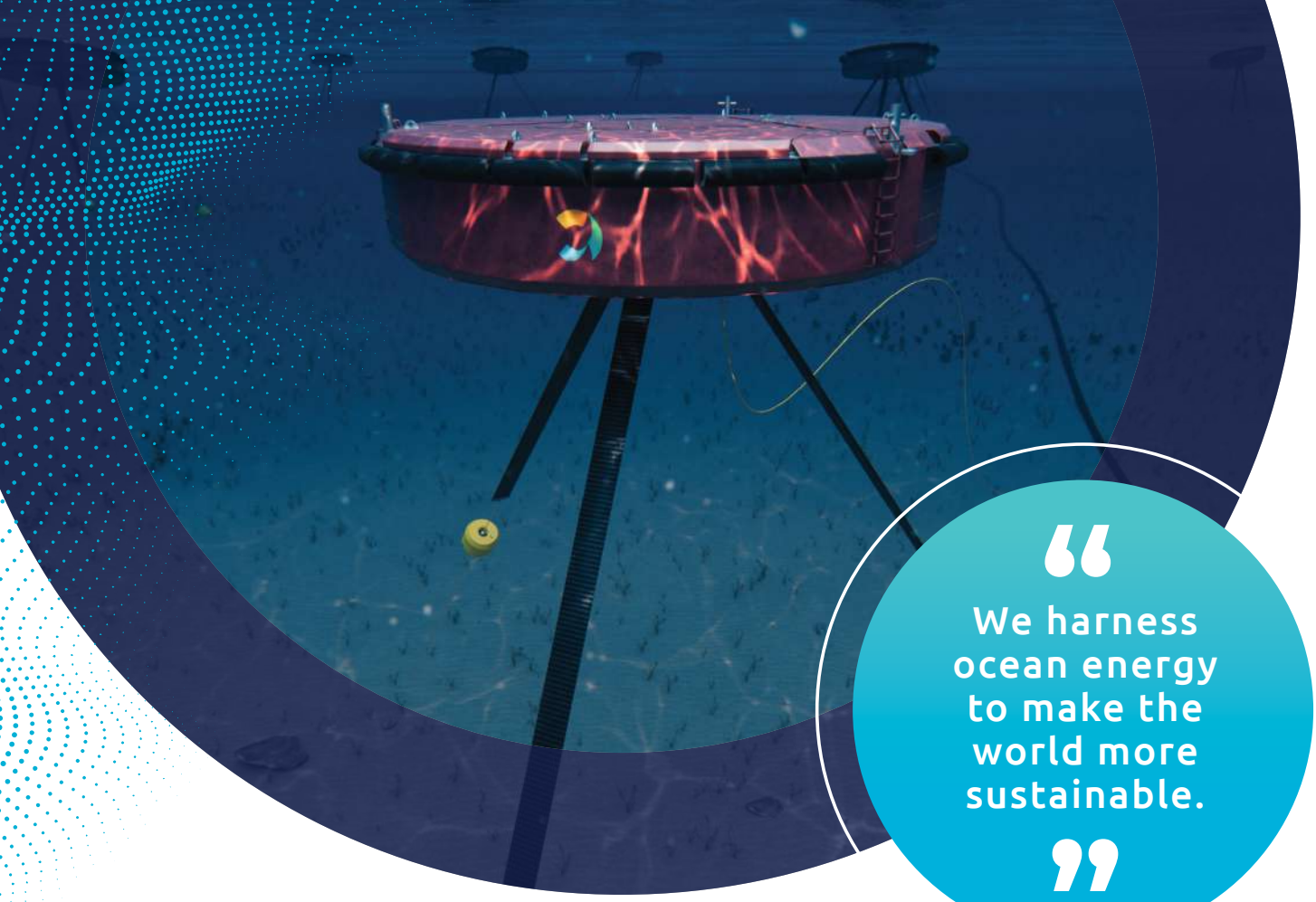


Image credit: Ocean Wave Energy in Australia, 2024.



> We harness ocean energy to make the world more sustainable.

Wave energy's natural rhythm complements the variability of wind and solar power. Waves tend to be stronger in winter months and often peak several hours after wind generation, creating a natural synergy that enhances grid stability and reduces reliance on energy storage. By diversifying the renewable energy mix with wave power, we can move towards a more resilient and sustainable energy system around the clock. The potential for wave energy converters to be co-located with offshore wind farms is being further explored, a concept that will lead to cost savings in infrastructure and maintenance. This synergy further strengthens the case for wave energy as a key player in the clean energy transition.

Beyond its grid benefits, wave energy offers unique advantages. Carnegie's CETO device is located offshore and under the surface of the water, it has minimal visual impact compared to other renewables. Installation of offshore technologies such as wave energy as part of a growing blue economy will stimulate local economies and expand local supply chains, creating jobs in manufacturing, installation, and maintenance. The wave energy industry itself is rapidly advancing with significant investments pouring into research and development, driving down costs and improving efficiency.

As the industry advances, further cost reductions will be delivered through learning by doing and learning by research, making wave energy increasingly competitive with traditional fossil fuel sources and alternative renewable energy technologies. Wave energy is expected to follow a similar cost trajectory as was seen for both wind and solar energy along their commercialisation pathways, with scale being a significant driver of cost reduction and commercial viability.

Harnessing wave energy creates new and significant economic, environmental and technical benefits. Countries are beginning to recognise these benefits with Europe and the USA ramping up efforts to provide the support required to capture the market opportunities. Australia is lagging behind, but still has a window of opportunity to develop the vision and policies required to capture the benefits associated with the wave energy industry.

In a world grappling with the urgent need to decarbonise our energy generation, wave energy represents a compelling solution, offering a clean, reliable, and abundant source of power that can help us navigate the challenges of climate change and build a brighter energy future.

Wave Energy's Global Momentum

With strong government backing, wave energy is riding a wave of momentum towards rapid expansion and a vital role in the clean energy transition. Over the coming years, private investment should be driven into the sector on the back of strategic visions, roadmaps and policies from global governments.

29,500TWh

Global wave energy potential exceeds 29,500TWh. (IRENA and OEE, 2023)

12%

Co-locating wave and offshore wind can save up to 12% in costs. (Offshore Wind Consultants Ltd, 2023)

Wave energy complements wind and solar for a reliable power supply. (Ocean Wave Energy in Australia, 2024)

€195M

Europe saw €195M public funding for ocean energy in 2023. (Ocean Energy Europe)

Deployment targets and revenue support are crucial for industry growth. (Ocean Energy Europe)

137MW

Europe leads in ocean energy with a 137 MW project pipeline. (Ocean Energy Europe, 2024)

25GW

The UK has a 25GW wave energy potential. (EVOLVE, 2023)

£19bn

Wave energy could be worth £19bn to the UK economy by 2050. (University of Edinburgh)

$112.5M

The US announced $112.5M funding for wave energy commercialisation. (US Department of Energy)

€240M

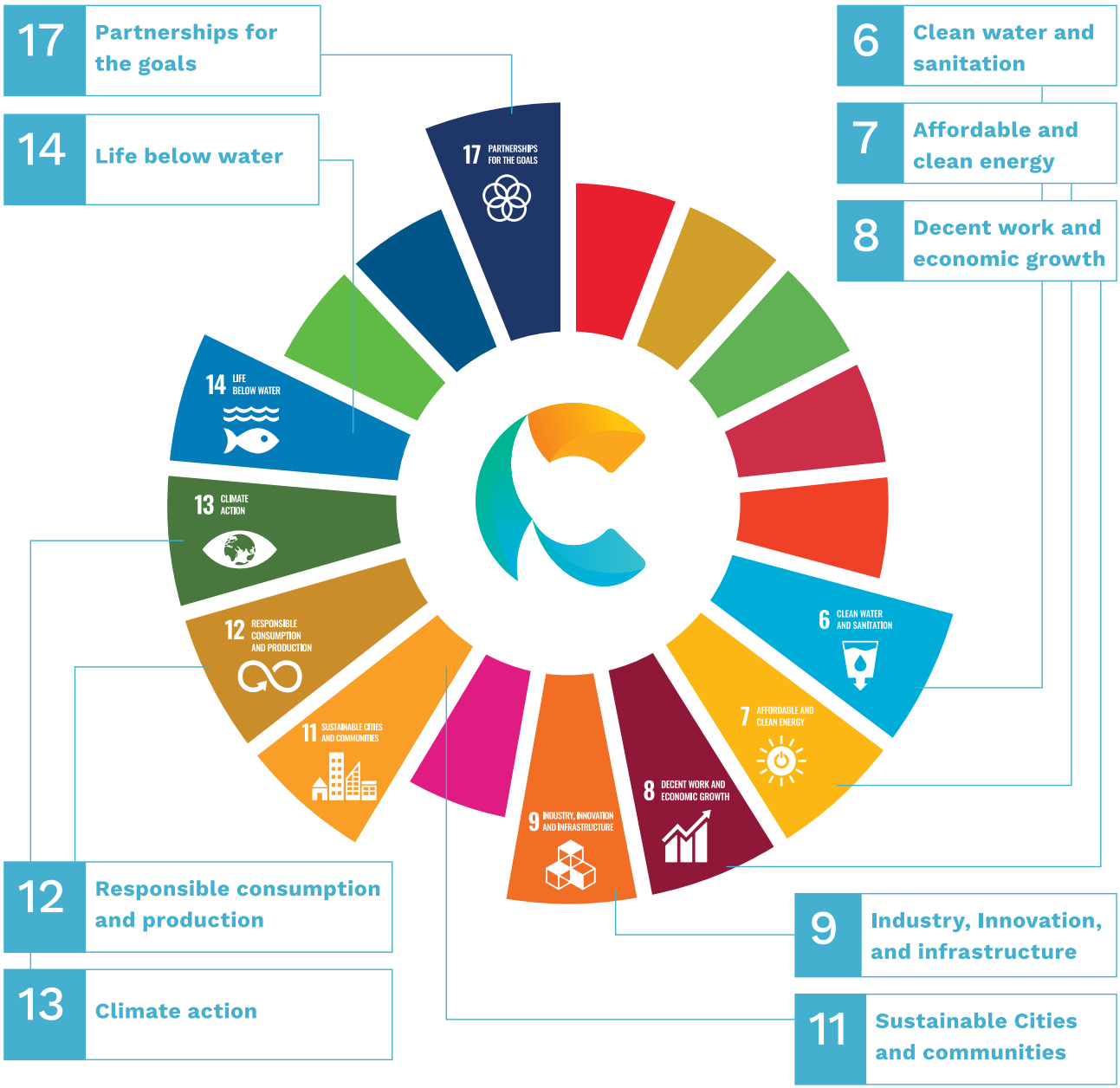
Spain's 'RENMARINAS DEMOS' Program awarded €240M to marine renewables, including €12.2M to wave energy. (IDAE)

€65M

France provided a financial package including at least €65M for the 17.5 MW FloWatt tidal stream project. (Ocean Energy Europe)

300GW

The average power of the ocean waves crossing the perimeter of Australia's continental shelf is estimated at around 300 GW, ten times Australia's average rate of electricity consumption. (Ocean Wave Energy in Australia, 2024)


17 Partnerships for the goals
14 Life below water
6 Clean water and sanitation
7 Affordable and clean energy
8 Decent work and economic growth
12 Responsible consumption and production
13 Climate action
9 Industry, Innovation, and infrastructure
11 Sustainable Cities and communities
17 PARTNERSHIPS FOR THE GOALS
14 LIFE BELOW WATER
13 CLIMATE ACTION
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
11 SUSTAINABLE CITIES AND COMMUNITIES
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
8 DECENT WORK AND ECONOMIC GROWTH
7 AFFORDABLE AND CLEAN ENERGY
6 CLEAN WATER AND SANITATION

SDG 6: Clean Water and Sanitation:

Ocean energy can power desalination to transform seawater into clean water, ensuring access to clean water for coastal communities.

SDG 7: Affordable and Clean Energy:

Carnegie remains at the forefront of the clean energy revolution. We will continue to develop affordable, sustainable wave energy solutions that reduce carbon emissions.

SDG 8: Decent Work and Economic Growth:

Our commitment to innovation and sustainable practices is not only contributing to environmental preservation, but also creating employment opportunities and driving economic growth in the regions we operate. We believe that a green economy can be a source of prosperity for all.

SDG 9: Industry, Innovation, and Infrastructure:

Carnegie is driving innovation in wave energy infrastructure, leading to advancements that will benefit industries, economies, and societies globally. We are committed to technological excellence and sustainable development.

SDG 11: Sustainable Cities and Communities:

Our work is not only about technology but also about transforming communities into sustainable, resilient hubs along our coastlines. By providing clean energy solutions and infrastructure, we are empowering coastal communities to thrive in a rapidly changing world.

SDG 12: Responsible Consumption and Production:

We recognise the importance of responsible consumption and production. By promoting the use of clean energy, we are contributing to a more sustainable future, where resources are used efficiently and sustainably.

SDG 13: Climate Action:

The fight against climate change is a global priority. We continue to play our part by harnessing the power of the oceans to generate clean, renewable energy.

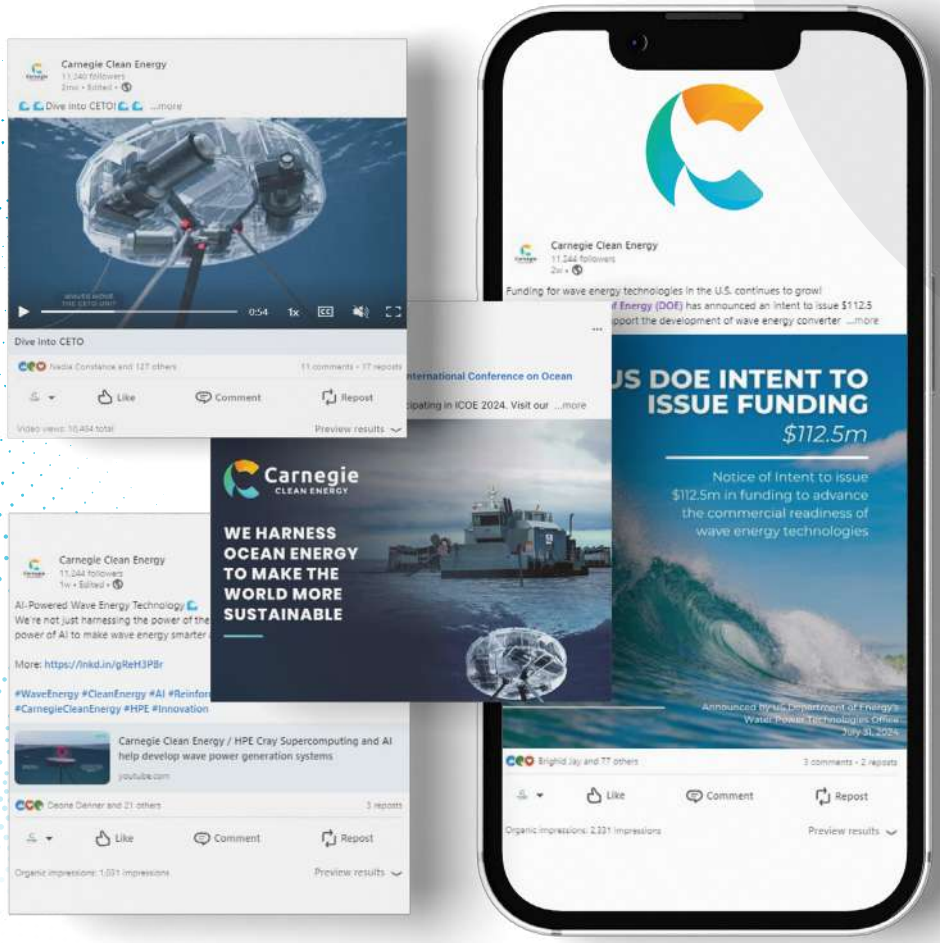
SDG 14: Life Below Water:

Through innovation and responsible ocean energy solutions, we are committed to safeguarding the rich biodiversity of our oceans.

SDG 17: Partnerships for the Goals:

None of these achievements would be possible without the strong partnerships we have forged with governments, organisations, and communities around the world. Together, we are driving towards a sustainable and prosperous future for all.

In the coming year, Carnegie remains dedicated to our mission of delivering clean, sustainable wave energy solutions and fostering partnerships that will support progress against these Sustainable Development Goals.



Social Media

Stay Connected with Carnegie

Carnegie's social media channels offer engaging insights into the world of Carnegie and the wave energy industry. You'll find interesting industry news, project highlights, and behind-the-scenes glimpses into our work, team members and partnerships. Connecting with us on our social media platforms provides a deeper understanding of the wave energy sector and Carnegie Clean Energy's role in shaping its future.

We're excited to see our online community grow as more people join us in the journey towards a cleaner future. Our LinkedIn platform has welcomed 2,692 new followers this year – a 24% increase. We appreciate the support and engagement from all who have connected with us to share in our commercialisation journey. To stay updated with Carnegie's email newsletter, featuring market updates and industry news, Scan the QR code provided to find the link to our mailing list.

Connect with Us on Social Media

Join the clean energy conversation and stay connected with Carnegie Clean Energy on social media. Follow us to discover the latest advancements in renewable technology, learn about our impactful projects, and be inspired by the positive change we're creating together. Scan the QR code to find us on your preferred platforms and become part of the movement towards a sustainable future.

Our Products

CETO® Technology

CETO is Carnegie's core wave energy converter technology named after a Greek sea goddess. Its distinctive, fully submerged design operates discreetly beneath the ocean's surface and converts the consistent and predictable waves into clean, grid-ready electricity.

This submerged configuration not only minimises visual impact but also enhances CETO's resilience in challenging ocean conditions. The units are designed to harmonise with the ocean's natural rhythm. While moving with the waves, CETO's power take-off system efficiently transforms wave energy into electricity utilising advanced control systems to optimise the performance of the technology.

A versatile and scalable solution for a broad spectrum of applications, CETO can provide energy independence to remote communities, demand applications and islands in addition to contributing to large-scale renewable energy grids. As the wave energy industry matures and cost efficiencies are realised, wave energy is expected to follow a similar growth trajectory observed in solar PV and offshore wind sectors.

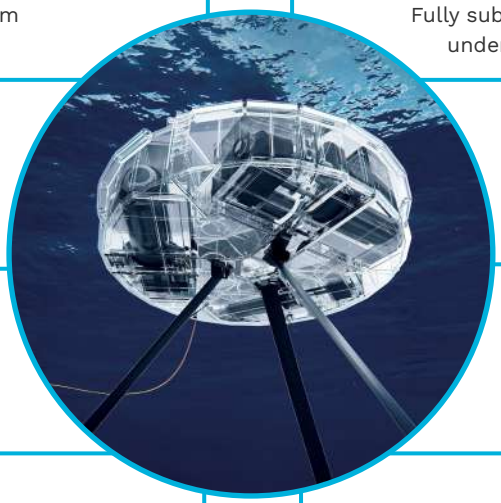
Carnegie is currently validating the CETO technology through the ACHIEVE Programme, which includes the design, manufacture, deployment and operation of a scaled CETO prototype in Europe.

Tested
Over 15 years of onshore, tank and tens of thousands of hours of in-ocean testing

Flexible
Operates in variety of water depths, swell directions, tides & seafloor conditions

Minimal Visual Impact
Fully submerged and invisible from shore

Storm Survivability
Fully submerged and dives deeper under extreme wave conditions



Desalination
Zero-emission freshwater co-production allows pseudo energy storage

Maintainable
Easily towed to port for upgrades and maintenance

Clean
Minimal environmental impact, co-exists with and encourages marine life

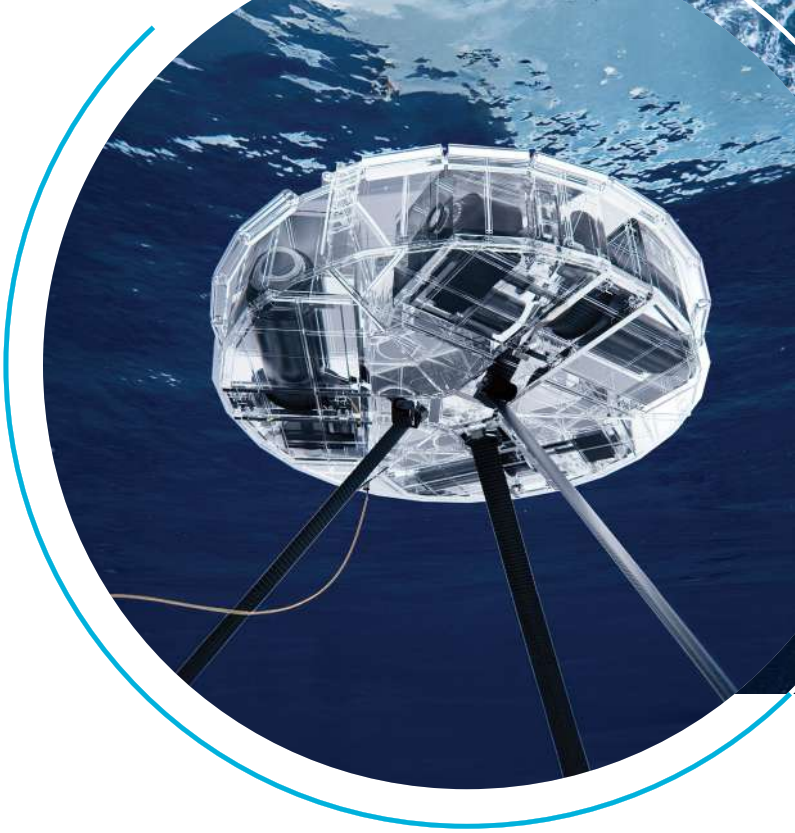
Scalable
Modular array design

Consistent, Predictable and Complementary
Provides grid benefits when deployed in portfolio with other renewables

Security
Provides emissions free sustainable energy and water security to countries and islands

ACHIEVE Programme

Carnegie and its international subsidiaries (CETO Wave Energy Ireland and Carnegie Technologies Spain) continue advancing the CETO wave energy technology towards commercial readiness via the ACHIEVE Programme, which will deploy a CETO prototype in the Basque Country. The first CETO deployment in Europe.

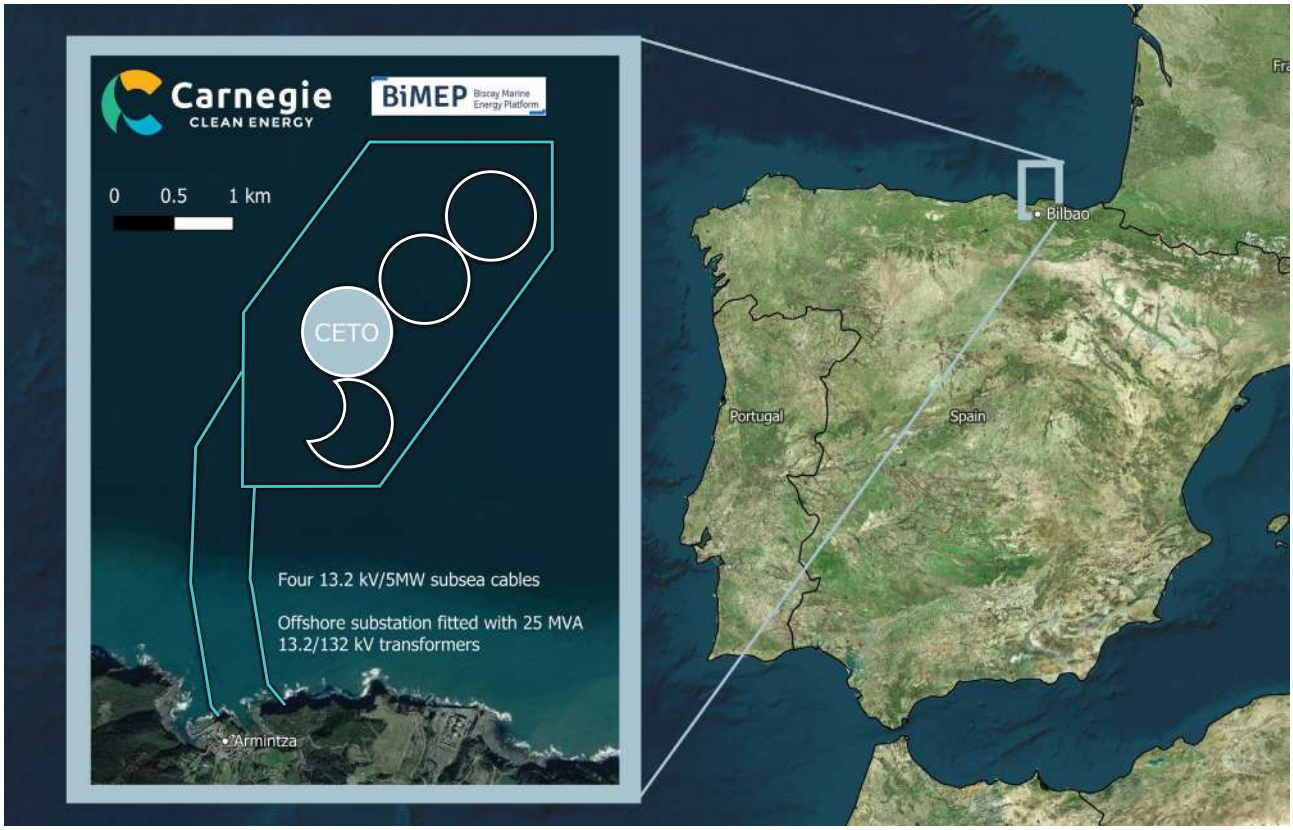


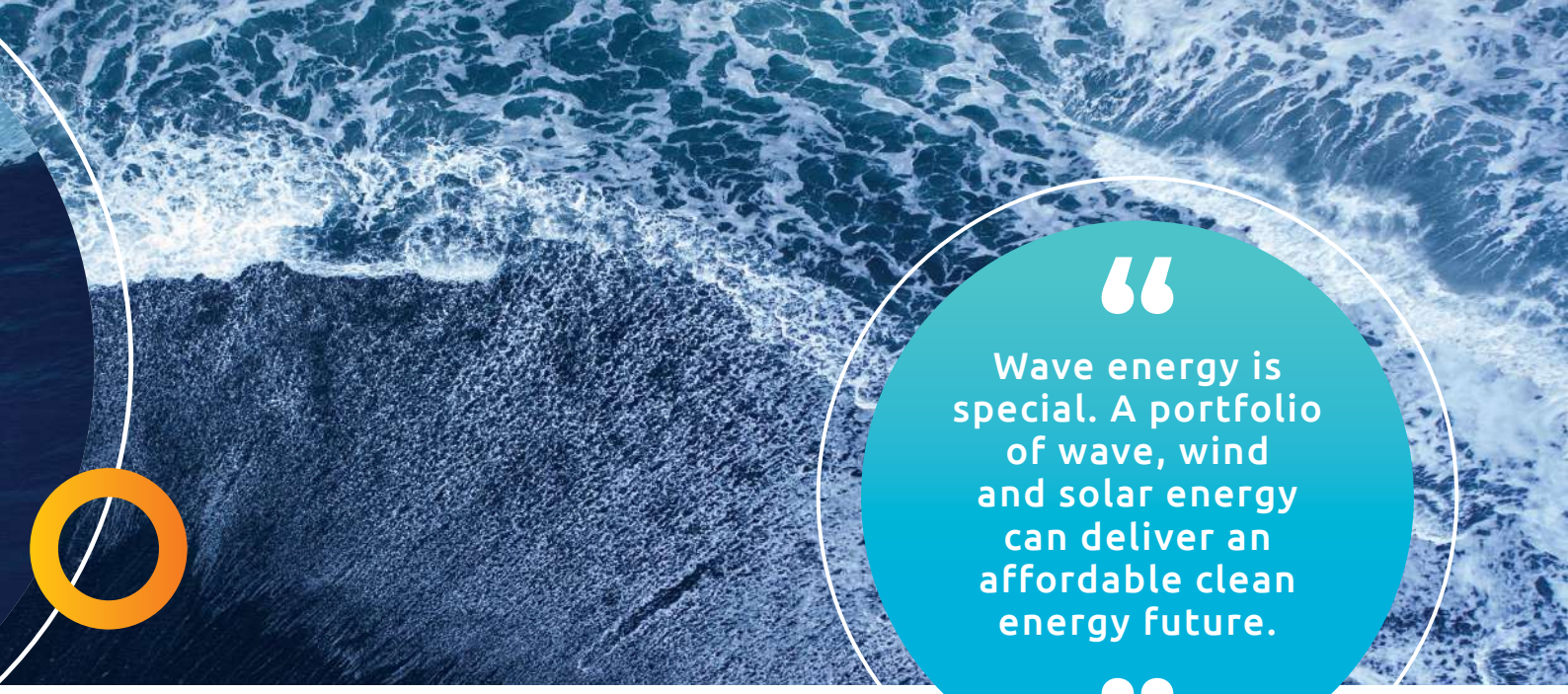
Carnegie's ACHIEVE Programme has received significant recognition and support, with its top ranked tender being awarded a contract via the EuropeWave Pre-Commercial Procurement (PCP) Programme, and additional grants awarded by the Basque Energy Agency (Ente Vasco de la Energía) and the Spanish Government's RENMARINAS DEMOS Program.

ACHIEVE Programme: Design, Manufacture, Deployment and Operation of a CETO prototype at BiMEP

Project: Deployment of the CETO wave energy converter at the Biscay Marine Energy Platform (BiMEP) in Bilbao, Basque Country, Spain.

Deployment Site: BiMEP (Biscay Marine Energy Platform), dedicated testing ground for wave energy installations.





> Wave energy is special. A portfolio of wave, wind and solar energy can deliver an affordable clean energy future.

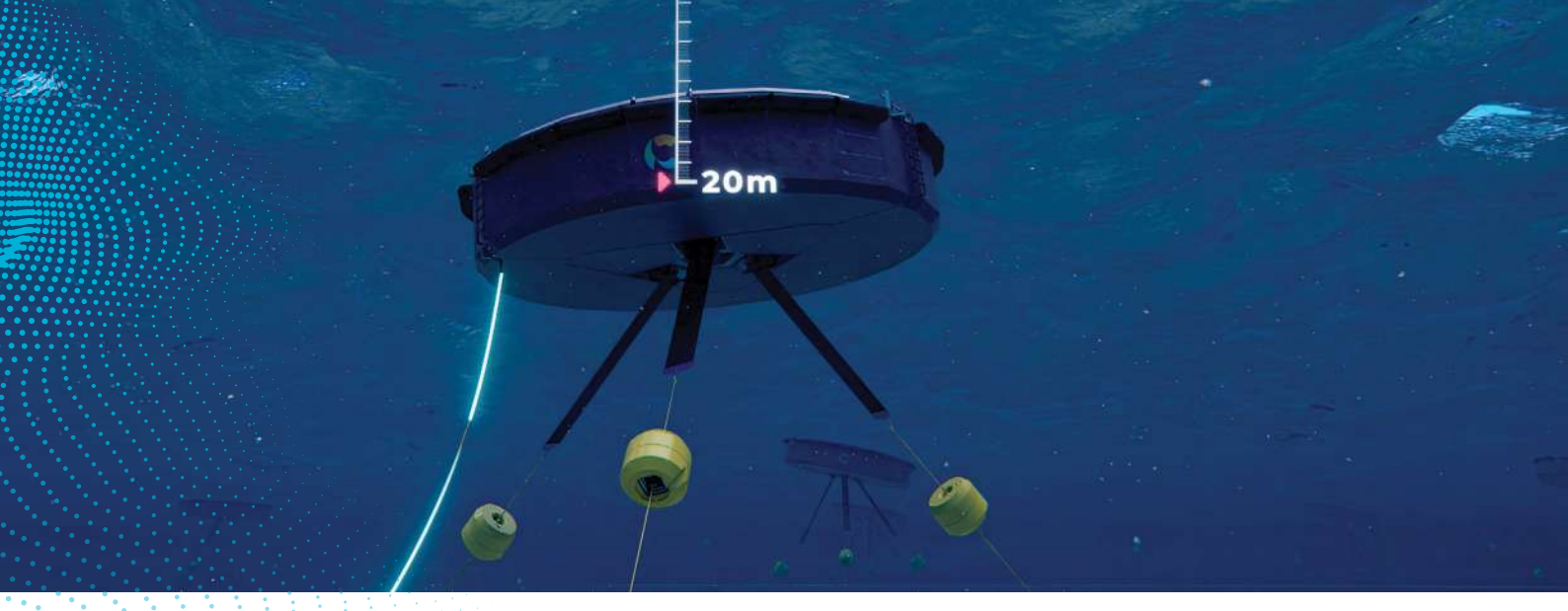
CETO Wave Energy Ireland's successful completion of Phases 1 and 2 of the EuropeWave programme was followed in September 2023 with the award of a €3.75 million Phase 3 contract to deploy CETO in Europe.

This award unlocked the deployment of a CETO device at the Biscay Marine Energy Platform (BiMEP) in the Basque Country. Receiving the highest score in the programme provided the Company with the strategic advantage of selecting its preferred berth location at BiMEP for the deployment. Achieving and number one ranking from the original 36 applicants is a testament to the quality of the team and the CETO technology.

Phase 3 activities under the ACHIEVE Programme commenced immediately in September 2023. The project has gained further traction through securing a berth reservation at BiMEP, awarding contracts for critical CETO component design and manufacture, and achieving the crucial Authority to Proceed (ATP) milestone which reinforces the EuropeWave Buyer's group's confidence in Carnegie's ability to deliver a successful deployment.

Following the successful award of the EuropeWave Phase 3 Contract and selection of the BiMEP site in the Basque Country, Spain, Carnegie's Spanish subsidiary, Carnegie Technologies Spain, secured additional funding to support the deployment of CETO at BiMEP through the Spanish Government and regional Basque Energy Agency.

- A €1.2 million grant from Spain's RENMARINAS DEMOS Program is enabling the Company to extend and enhance the CETO deployment at BiMEP. This includes extending the operational period to two years, improving wave prediction capabilities, developing local infrastructure, and fostering collaboration with BiMEP on environmental surveys, knowledge dissemination, and operations and maintenance.
- A €2.1 million grant from the Basque Energy Agency (Ente Vasco de la Energía) is providing targeted support for crucial CETO components such as the Buoyant Actuator, Mooring System, Power Take Off, and integration of the Reinforcement Learning Controller. This funding is not only bolstering local manufacture in the Basque Country but also reducing technical and financial risks, paving the way for accelerated commercialisation and increased investor confidence.



Funding Support for the ACHIEVE Programme

The ACHIEVE Programme is being delivered by Carnegie Subsidiaries CETO Wave Energy Ireland and Carnegie Technologies Spain with support from Carnegie Clean Energy and additional funders as outlined below.

EuropeWave PCP Contract: €3.75m

- CETO Wave Energy Ireland
- Focus: Accelerating wave energy development
- Funds a scaled CETO prototype deployment

The EuropeWave project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under grant agreement No 883751.

JULIA F. CHOZAS
CONSULTING ENGINEER

RENMARINAS DEMOS Grant: €1.2m

- Carnegie Technologies Spain
- Focus: Advancing marine renewables in Spain
- Enhances CETO deployment (extended operation, wave prediction, infrastructure, local knowledge)

Basque Energy Agency (EVE) Grant: €2.1m

- Carnegie Technologies Spain
- Focus: Supporting local involvement, technological advancements
- Targets specific CETO components (Buoyant Actuator, Mooring System, PTO, RL Controller)

External Funding: €7.05m

Additional Research and Development Activities

In addition to its core CETO product validation work being undertaken via the ACHIEVE Programme, Carnegie Clean Energy and its subsidiaries are active participants in several international research and development (R&D) projects. The Company has been selected to provide technical expertise on two European research projects that are driving longer term improvements to wave energy technologies:

- The MEGA Wave PTO Project, focused on advancing the power generation technology options for wave energy converters.
- The WECHULL+ Project, centred around developing sustainable and environmentally friendly concrete structures for offshore structures like wave energy converters.

These engagements utilise our team's technical expertise in wave energy technology to further innovation within the sector. By actively participating in these initiatives, we continue to contribute to the advancement of wave energy development.

The company's involvement in these projects also provides access to a variety of industry expert knowledge, ensuring that Carnegie stays at the forefront of technological advancements and can use that know-how to benefit the commercialisation of our wave energy technologies. Participation in ongoing R&D creates opportunities to learn valuable lessons from the projects and also support the growth of the wave energy industry.

Industry Partnerships and Engagement

Over the past year, Carnegie has increased industry engagement with potential supply chain partners across Europe. The engagement and partnerships developed with the supply chain for the ACHIEVE Programme are important as they also support the ongoing validation and commercialisation of the CETO technology.

This year also delivered strengthened existing industry partnerships such as with Hewlett Packard Enterprise (HPE) on the development of the Reinforcement Learning based advanced controller for CETO. In addition to delivering technical value to the commercialisation of CETO, the partnership is also enabling Carnegie to reach new audiences. During the year, Carnegie's collaboration with HPE was highlighted through several media pieces and at the HPE Discover Conference at in Las Vegas, USA, a key technology event in the USA.

Carnegie and HPE's collaboration was discussed by HPE's CEO during his keynote address at HPE Discover, held in Sphere, Las Vegas. In addition, during the event Carnegie's CEO presented in a session focused on how AI is revolutionising industries and driving innovation. Our work got further exposure through the CETO animation and model wave tank which were displayed in the HPE DIscover Showcase, for over 14,000 people in attendance at the Venetian Exhibition Centre in Las Vegas.

Our Products

MoorPower® Technology

As the aquaculture sector moves operations further offshore, new challenges are encountered to access clean and reliable energy. Without shore-based power, energy intensive offshore aquaculture operations such as feeding barges are reliant on diesel generators with many associated costs, risks and carbon emissions. This is also true of many moored vessels across the blue economy.

Carnegie's solution to address this challenge is MoorPower, a spin-off technology that incorporates core aspects of Carnegie's CETO technology and know-how into a novel wave energy converter system for use in offshore energy demand applications. The first market for this product is expected to be aquaculture barges and vessels that require energy for electrical loads operating offshore. Carnegie's new wave power product addresses the challenge of securing clean and reliable energy offshore and replaces the diesel generation that would otherwise be required.

The concept and vision for MoorPower grew out of engagement with stakeholders in the Blue Economy CRC (BE CRC) including key aquaculture companies and their technology providers, ensuring that Carnegie understood their requirements, constraints and challenges.

In order to deliver MoorPower to the market, Carnegie is undertaking a strategic development pathway that is ultimately intended to lead to commercial roll out of the technology. During 2024, the Company achieved the significant milestone of the deployment and validation of the MoorPower Scaled Demonstrator and is moving into the next phase, working towards securing the first commercial prototype on an operational feeding barge.

MoorPower deployed at Carnegie's offshore test site in North Fremantle, Western Australia.

MoorPower Commercialisation Pathway

Concept		**Done:** Develop novel MoorPower product in response to offshore aquaculture requirements.
Requirements and Goals		**Done:** Requirement not to negatively impact customer operations. Annual average power produce is more than 50% of the annual average energy required.
Scaled Demonstrator		**Done:** Scaled Demonstrator design. **Done:** Scaled demonstrator deployment to validate functional design and numerical model.
Commercial Prototype		**Commenced:** Commercial Design. **Next:** Deploy MoorPower system on operational aquaculture barge.
Commercial Rollout		**Future:** Roll out MoorPower systems to decarbonise global offshore aquaculture and other offshore industries.

MoorPower Scaled Demonstrator Project

Following the successful design process in previous years, the team completed the manufacture, assembly and onshore testing of the MoorPower scaled demonstrator at the onsite facilities in preparation for deployment in the summer of 2024. In January 2024, the demonstrator was deployed at Carnegie's offshore test site in North Fremantle, Western Australia, as part of the $3.4 million Blue Economy CRC funded project.

The successful deployment in early 2024 marked an exciting step in the commercialisation pathway of the technology and allowed future customers (and project partners) to see the technology in action, watch the live data coming into Carnegie's facility, and learn from the data collected during the deployments.

The Scaled Demonstrator deployments have provided critical data that has now successfully validated the functional design and numerical modelling of the system in various sea conditions.

The core design has been proven with the MoorPower modules functioning as predicted. The numerical models were validated using Demonstrator performance data and commercial feeding barge motion data, providing confidence in Carnegie's ability to forecast the performance of the Commercial MoorPower system for a variety of barges globally.

Following the successful deployment of the MoorPower Scaled demonstrator, Carnegie is actively working towards a commercial scale deployment of the MoorPower modules onboard a working aquaculture barge.

Partnerships and Collaborative Ecosystems

Carnegie's collaborative approach drives wave energy innovation through strategic partnerships with project developers, industry leaders, research institutions, and global industry associations.

These collaborations accelerate technology commercialisation, enhance performance, and reduce costs, while ensuring Carnegie is at the forefront of wave energy technology developments.

ACHIEVE PROGRAMME

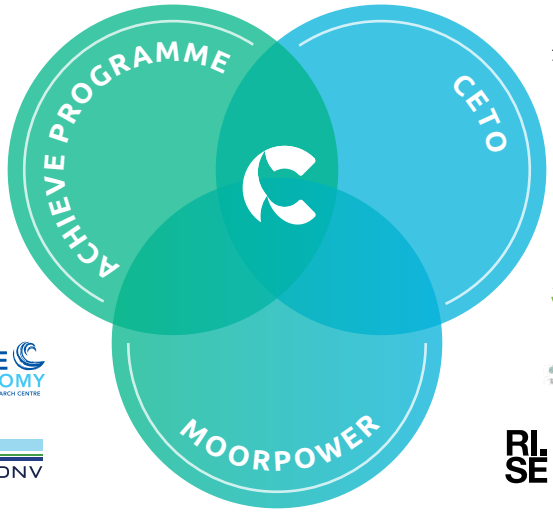
EUROPEWAVE
Funded by the European Union NextGenerationEU
ENERGIAREN EUSKAL ERAKUNDEA ENTE VASCO DE LA ENERGÍA
IDAE
RENOVABLES MARINAS DEMOSTRADORES
Plan de Recuperación, Transformación y Resiliencia
ACS AUSTRALIA
CETO WAVE ENERGY IRELAND
Hewlett Packard Enterprise
HUTCHINSON
JULIA F. CHOZAS CONSULTING ENGINEER
Carnegie Technologies Spain
Quoceant Innovation Offshore
saitec offshore technologies
VGA

CETO DEVELOPMENT

GEN
CHEROS Energy Engineering
CETO WAVE ENERGY IRELAND
mocean energy
Ocean Energy Europe
Pure Marine
RWTH AACHEN UNIVERSITY
Sant'Anna Scuola Universitaria Superiore Pisa
SUPPLYDESIGN
TECHNICAL UNIVERSITY OF CRETE
THE UNIVERSITY of EDINBURGH
WavEC Offshore Renewables
WECHULL+
Australian Government Australian Research Council
BLUE ECONOMY COOPERATIVE RESEARCH CENTRE
Australian Government Department of Defence
IEC
OCEANTERA
UK MARINE ENERGY COUNCIL
THE UNIVERSITY of ADELAIDE
THE UNIVERSITY OF WESTERN AUSTRALIA
wave energy SCOTLAND
NREL
poet PACIFIC OCEAN ENERGY TRUST
TEAMER
U.S. DEPARTMENT OF ENERGY
TU Delft
RISE
Carnegie CLEAN ENERGY
GDAŃSK UNIVERSITY OF TECHNOLOGY
OCEAN HARVESTING
Pekabex
SOLARDUCK
PLOCAN

MOORPOWER

HUON
tassal TASSAL GROUP
THE UNIVERSITY OF QUEENSLAND AUSTRALIA
AMCS AMC SEARCH
BLUE ECONOMY COOPERATIVE RESEARCH CENTRE
UNIVERSITY of TASMANIA
ACS AUSTRALIA
DNV
CLIMATEKIC Australia



Garden Island Microgrid

One of Carnegie's unique assets is its 100% ownership of the Garden Island Microgrid (GIMG), located on HMAS Stirling in Western Australia. The Garden Island Microgrid system includes the following:

2MW Solar PV Array

2MW Battery Energy Storage System

Offshore lease area for wave energy

Onshore electrical connection point for future wave energy deployments in Carnegie offshore lease area

Carnegie sells clean renewable energy from the Garden Island Microgrid to the Department of Defence under an Electricity Supply Agreement. In addition, as a registered renewable energy power station, one Large-Scale Generation certificate (LGC) is created for every megawatt-hour (MWh) of eligible electricity generated by Garden Island Microgrid. These LGCs are held by the Company and periodically sold in batches. During the year, the sale of LGCs generated $117,616 in revenue for the Company.

The asset also offers a unique opportunity for future wave energy projects through its available electrical connection point, existing offshore infrastructure, and ability to sell power through the existing Electricity Supply Agreement. The offshore wave lease area was the site of Carnegie's previous Perth Wave Energy Project and any future projects could benefit from the previous site data and infrastructure investments made at the site.

This year the Garden Island Microgrid passed a generation milestone, exceeding 5,000 tonnes of carbon emissions avoidance.

Additional Information

Additional information required by the Australian Stock Exchange Limited Listing Rules and not disclosed elsewhere in this report. The information was prepared based on share registry information processed up to 3 October 2024.

Spread of Holdings	Number of holders of ordinary shares
1 - 1,000	3,827
1,001 - 5,000	3,220
5,001 - 10,000	1,444
10,001 - 100,000	2,652
100,001 and over	471

Number of Holders: **11,614.**

Number of Shareholders holding less than a marketable parcel: **8,791 at share price of $0.039.**

Substantial Shareholders		
Shareholder Name	**Number of Shares**	**%**
Log Creek Pty Ltd (88 Green account)	20,430,709	5.58%

Voting Rights: All ordinary shares carry one vote per share without restriction. Options for ordinary shares do not carry any voting rights.

Statement of Quoted Securities: Listed on the Australian Stock Exchange are 366,203,472 fully paid shares. All ordinary shares carry one vote per share without restriction. Options for ordinary shares do not carry any voting rights.

Company Secretary: The name of the Company Secretary is Grant Jonathan Mooney.

Registered Office: The registered office is at 21 North Mole Drive, North Fremantle WA 6169. The telephone number is (08) 6168 8400.

Twenty Largest Holders of Each Class of Quoted Equity Securities - Ordinary Fully Paid Shares		
Shareholder Name	**Number of Shares**	**%**
Citicorp Nominees Pty Limited	25,801,309	7.05%
HSBC Custody Nominees (Australia) Limited	22,121,923	6.04%
BNP Paribas Nominees Pty Ltd <Clearstream>	18,003,794	4.92%
Asymmetric Credit Partners Pty Ltd	15,539,710	4.24%
HSBC Custody Nominees (Australia) Limited - A/C 2	8,994,637	2.46%
Dawnray Pty Ltd <HWBL Superannuation Fund A/C>	8,607,273	2.35%
Richcab Pty Limited <Dale-Mckenzie Super Fund A/C>	8,057,273	2.20%
Mr Grant Jonathan Mooney	5,000,000	1.37%
Mr Barry Leslie Ramsay	4,500,000	1.23%
Daws & Son Pty Ltd	3,571,440	0.98%

N & C Watts Super Pty Ltd <N & C Watts SF A/C>	3,100,000	0.85%
BNP Paribas Noms Pty Ltd	2,151,562	0.59%
Ocean Flyers Pty Ltd <S & G Mooney Super Fund A/C>	2,000,000	0.55%
Hurose Pty Ltd	1,963,586	0.54%
Fraser Investment Holdings Pty Ltd <Fraser Investment A/C>	1,926,504	0.53%
Miss Michelle Rosalie Smith	1,693,925	0.46%
Mr Carl Gianatti & Mrs Margaret R Gianatti <The Gianatti Super Fund A/C>	1,598,395	0.44%
Miss Lynn Clare Murray	1,595,684	0.44%
Merrill Lynch (Australia) Nominees Pty Limited	1,406,351	0.38%
GFSF Super Pty Ltd <Grogan Fam SF A/C>	1,400,000	0.38%
Total	**139,033,366**	**37.97%**

Holders of Securities in an Unlisted Class - Options Issued Under Employee Incentive Plan (Management And Staff)

Optionholder Name	Option Code	No. Options	Exercise Price $	Expiry Date
Mr Jonathan Fiévez	CCEOPT11	3,000,000	$0.18000	13/10/2024
Terry Dewayne Stinson <Stinson Family A/C>	CCEOPT12	2,000,000	$0.18000	22/11/2024
A&J Shields Co Pty Ltd <A&J Shields Fam Invest A/C>	CCEOPT12	2,000,000	$0.18000	22/11/2024
Mr Grant Mooney	CCEOPT12	2,000,000	$0.18000	22/11/2024
Terry Dewayne Stinson <Stinson Family A/C>	CCEOPT15	2,000,000	$0.15000	25/11/2024
Management & Staff	CCEOPT16	6,600,000	$0.06500	24/07/2026
Mrs Paula Louise Fiévez <The Regeneration A/C>	CCEOPT16	3,000,000	$0.06500	24/07/2026
Total		**20,600,000**		

Holders of Securities in an Unlisted Class - Options

Optionholder Name	Option Code	No. Options	Exercise Price $	Expiry Date
Cameron Charles Griffin	CCEOPT12	1,600,000	$0.1800	22/11/2024
Vicki Wendy Groat	CCEOPT12	400,000	$0.1800	22/11/2024
Asymmetric Credit Partners Pty Ltd	CCEOPT04	5,000,000	$0.0625	28/10/2024
Total		**7,000,000**		

Carnegie
CLEAN ENERGY

21 North Mole Drive
North Fremantle WA 6159
+61 8 6168 8400
www.carnegiece.com

Carnegie Clean Energy Limited
ABN: 69 009 237 736