



# Annual General Meeting

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November 2023

Carnegie Clean Energy Ltd

ASX: CCE  
OTC: CWGYF

2023

# Carnegie Clean Energy Opportunity

Global clean energy generation emissions targets are unlikely to be met without the scale, consistency and predictability of wave energy



- Carnegie is a global leader in wave energy technology
- We have attracted more than €4.95m (\$8m AUD) in international funding this year
- Our LCOE is competitive with offshore wind and solar PV at the same stage of its development and scale. It is dropping on a trajectory that is meeting or exceeding the maturity pathway of major renewable technologies
- The global challenge is to deliver a transition to clean energy with the ability meet future demand for sustainable, reliable and affordable energy
- Out of dozens of international technologies that entered this year's EuropeWave PCP competitive programme, CETO was ultimately ranked number one. The technology was judged on criteria including LCOE, performance, reliability, availability and survivability

# Carnegie Clean Energy Opportunity

## Carnegie now ready to lead industry into commercial deployment

- **Carnegie is a company at inflection point**
  - Our CETO technology is unique and we own the intellectual property for this world leading wave energy technology
  - Contract to deploy, generate and connect to grid connected in Europe's Basque region from 2025
  - We have begun engaging with strategic partners who share our vision and understand that scale is the key to unlocking potential for the planet
- **Strong business case and investment proposition:**
  - ASX listed company with a portfolio of established assets
  - Strategic investors and commercial partner ecosystem - HPE, EuropeWave, Blue Economy CRC
  - Revenue generation from Government (Defence) electrical supply contract at 100% owned microgrid energy project (wave, solar, battery, desalination plant) in Western Australia

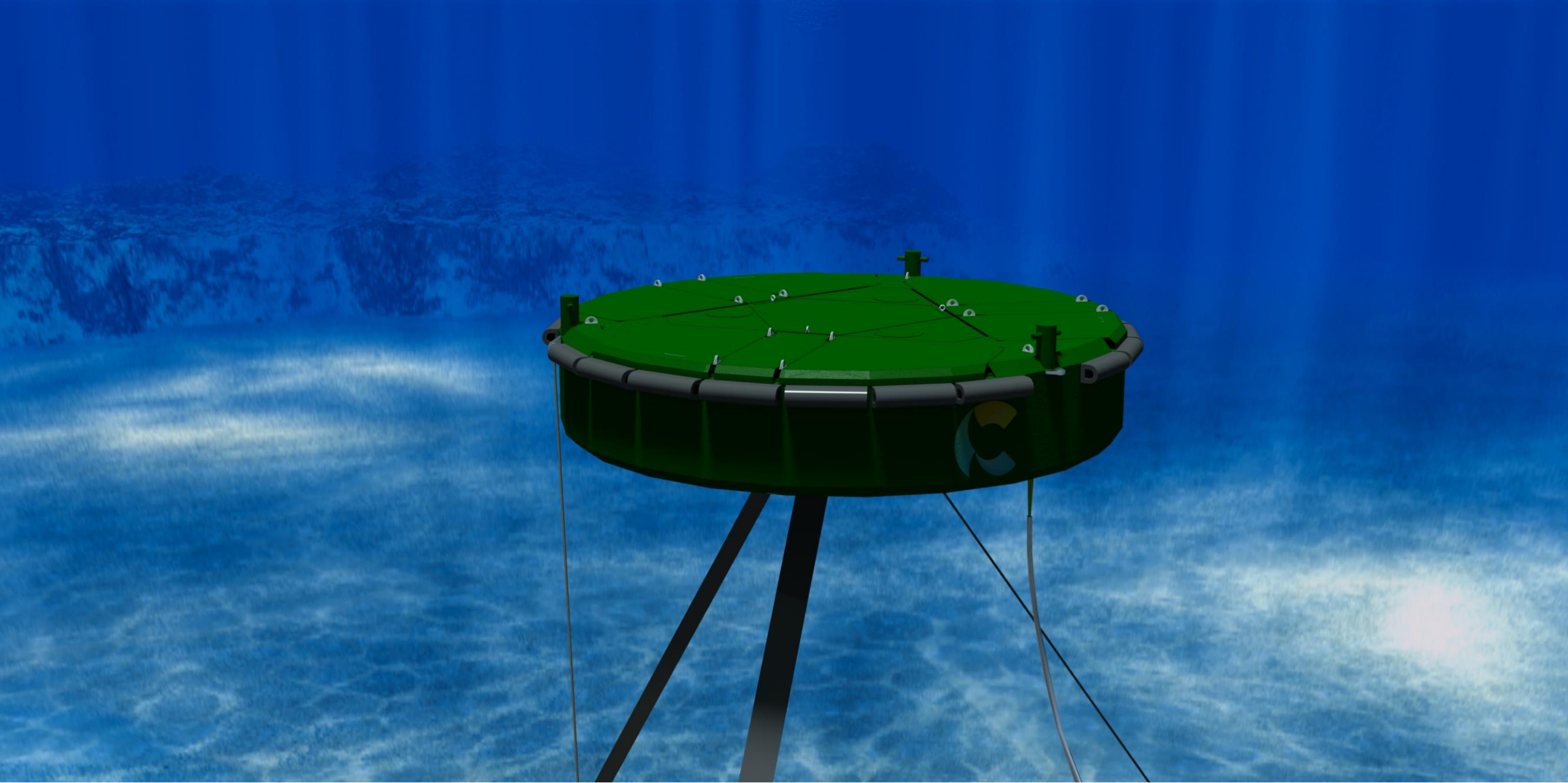


# Year in Review - EuropeWave



*This year was a remarkable transformative period for Carnegie Clean Energy on its journey toward commercial scale*

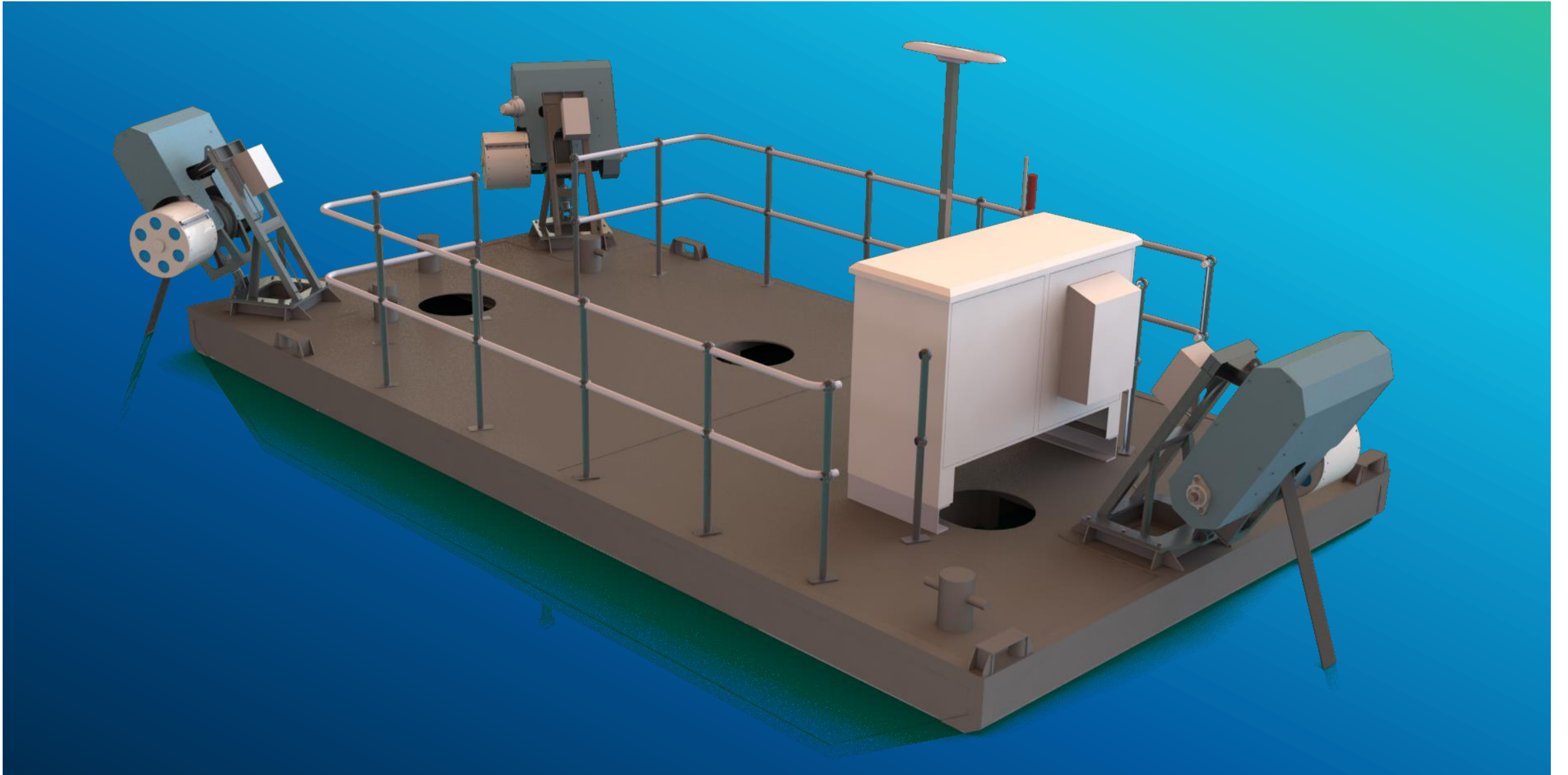
- Tank test #2 completed with world-first RL control demonstrated
- Design progressed to preliminary level
- 1000 pages of documentation submitted at Phase 2 completion
- In September, Carnegie subsidiary CETO Wave Energy Ireland Ltd awarded a €3.75 million EuropeWave contract to deploy a grid-connected CETO unit in the waters off the Basque Country
- In that selection process, CETO was ranked number one against the world's best international competing technologies
- Carnegie Technologies Spain has also been awarded a €1.2 million Renmarinas grant



# Year in Review – MoorPower Scaled Demonstrator



- MoorPower modules designed and assembled
- Considerable testing already complete
- Challenges with components has led to delays
- Barge structural upgrades and additions complete
- Conclusion of testing and final commissioning over the coming weeks



# Year in Review – Garden Island



- Revenues continue to be received for power sales under agreement with Defence
- circa 900 tonnes of carbon equivalent avoided per annum
- Payment of \$1.5m received from panel supplier to support replacement of faulty panels
- Storm damaged panels replaced under insurance policy
- Dealing with outages/disturbances on Defence network but uptime steadily improving



# Current Carnegie Projects

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## EuropeWave

A\$6.2m (€3.7m)  
Funding secured

## AGUAMARINA

A\$1.9m (€1.2m)  
Funding secured

## MoorPower

A\$3.4m  
Funding secured

## Garden Island Microgrid

A\$2.2m Valuation  
Conservative Valuation



Our announcements this year are capturing public attention, building pride in what is being achieved

# THE AUSTRALIAN

## Australia must ride the wave of ocean power

JONATHAN FIEVEZ

The power of the sea should never be ignored. It's a lesson most Australians learn as young children while wading in the shallows; turning your back on even small waves is rarely a good idea.

Yet as adults, it seems this is a lesson we may need to relearn.

As coal retires from our power system we need at least 90 per cent of the world's electricity to come from renewable sources.

Wind and solar farms, once controversial, are now commonplace and an essential part of the energy mix. Yet the question of what happens when the wind doesn't blow and the sun doesn't shine still needs answers.

Wave energy provides one of those answers.

What happens on a still night when solar stumps producing and the wind is calm?

Look out to sea keep rolling in.

It is variable, and highly predictable feature among o

This is why A dramatic coastal beautiful, it also

to accelerate the into a clean ener

In fact, the CSIR possess the world energy resource.

It is generatio emissions and er potential. But wa technology still z development.

We are curze

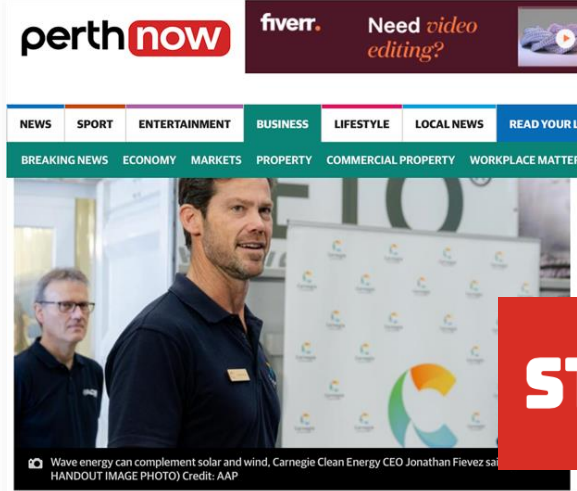
It will eventually supply cities, remote communities, offshore aquaculture and other offshore commercial facilities with affordable, reliable and sustainable energy.

Many countries, including Australia, China, Britain, France, Spain and the US, are currently developing wave energy.

Our Australian technology is grabbing the attention of these countries and many more. What we've developed and tested in the waves in Western Australia and overseas has the potential to harness the power of the ocean right around the world.

At the moment, governments abroad are leading the way when it comes to supporting the development of this technology.

Ironically, most of these countries have coastlines smaller than Australia's with lower wave energy potential, but they recognise the opportunity and want to capture a leadership role in order to deliver the value to the environment and their economy.



## Europe selects Aussie wave technology for ocean energy



## Which ASX stocks are protecting their IP with a green technology patent?

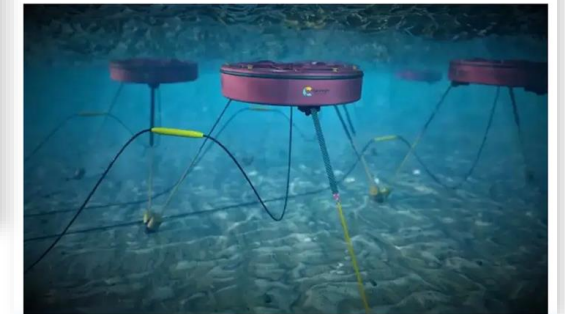
Green tech innovation is essential to achieve climate change goals and many countries have fast-tracking schemes in place for green tech patents.

Emma Davies  
7 min read September 11, 2023 - 12:27PM Stockhead



## "Remarkable:" Australian wave energy pioneer wins major tender to build first unit in Spain

Sophie Vorrath 6 September 2023 10





# Potential for wave energy

## Wave Energy is a vast untapped opportunity

- With the ocean covering more than **70% of Earth**, wave energy is an enormous clean, renewable resource
- It's the most **consistent, predictable and abundant source of clean energy** available day and night
- Wave energy **complements variable wind and solar** and requires lower associated energy storage due to consistent output
- The technology can co-exist and even enhance marine life and coastal ecosystems and does not alter the visual amenity for coastal communities.



# Global potential of the wave energy market

**↗ 40 GW**

Ocean energy is coming. The European Commission has set clear targets of 100MW of installed ocean energy capacity by 2025, 1GW by 2030 and 40GW by 2050. With the right support, this could happen sooner.

**↗ €53bn p.a.**

Ocean Energy Europe forecast ocean energy to be a €53bn per annum industry, supporting 50,000 jobs.

**↗ 70 %**

The amount of the world's surface covered by our oceans.

**↗ 350 GW**

The International Renewable Energy Agency's current estimate of ocean energy installed capacity by 2050.

# Look ahead – MoorPower

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- Scaled Demonstrator final assembly and commissioning
- Demonstrator deployment and operation
- Analysis of real data captured from operating salmon feed barge
- Targeting formation of new MoorPower commercial scale project with commercial fish farmer

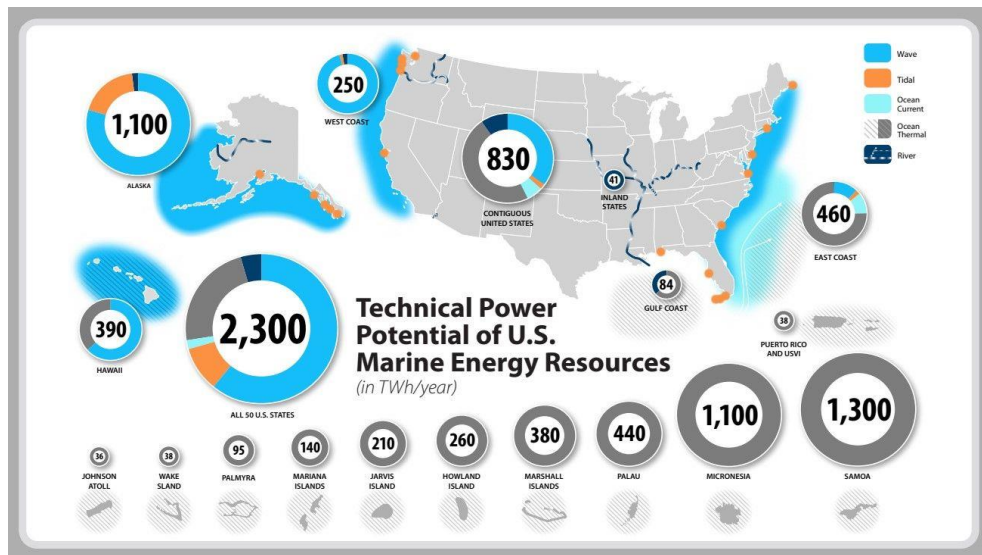
# Look ahead - EuropeWave / CETO



- Approaching the crucial time of:
  - Finalising detailed design
  - Forming contracts with suppliers
  - Ordering components
- Spain team expanding
- Working with BiMEP test site
- Identifying local marine operators

# Look ahead – Commercial Projects

- Discussing opportunities beyond EuropeWave with utilities, energy companies and project developers
- New funding and other support mechanisms emerging in Europe and US
- Europe is increasing ambition of targets and corresponding support mechanisms





# Our experienced board with proven track record



**Terry Stinson**  
Non-Executive Chairman

Terry brings over 35 years of leadership and commercial experience with global innovative companies.



**Michael Fitzpatrick AO**  
Non-Executive Director

Committed to sustainability, Michael is a precursor in renewable investments, including investing in the first commercial windfarm in Australia in the 1990s.



**Anthony Shields**  
Non-Executive Director

Anthony has vast financial expertise and is the Managing Director of Asymmetric Investment Management Pty Ltd.



**Grant J Mooney**  
Non-Executive Director /  
Company Secretary

Grant brings broad knowledge in the areas of corporate governance and project management.



# Our world-class management team



**Jonathan Fiévez**  
Chief Executive Officer

Jonathan brings considerable expertise in innovation and technical leadership. He's been with the company for 15 years and has a wealth of experience in the broader energy sector.



**Brigid Jay**  
Chief Commercial Officer

Brigid has a Masters in Environmental Sustainability and brings expertise in innovation policy. She has been with Carnegie for over 12 years and supports our corporate, commercial, intellectual property, legal and partner ecosystem functions.



**Dr Alexandre Pichard**  
Chief Technology Officer

Alexandre has a Doctorate in Physics and has been a core member of Carnegie's engineering team for over 12 years. He brings a deep understanding of our technologies, supply chains and the wider wave energy industry.

“Our team is delivering a leading technology that is capturing attention right around the world.”

**Jonathan Fiévez,**  
Carnegie CEO





**Be part of the Australian innovation that will unlock  
the power of the world's oceans**



**Carnegie**  
**CLEAN ENERGY**

**Carnegie Clean Energy Limited**  
ABN 69 009 237 736 | ASX: CCE  
Phone: +61 (0)8 6168 8400

Registered office:  
21 North Mole Drive  
North Fremantle  
WA 6159

Postal address:  
PO Box 39  
North Fremantle  
WA 6159