

ASX Announcement

April 15, 2016

Carnegie partners with the University of Western Australia on \$1 million wave energy research project

Federal Minister for the Environment, the Hon Greg Hunt MP, has this week announced that alongside the University of Western Australia (UWA), Carnegie Wave Energy Limited (Carnegie) will soon start investigating the optimal number, size, arrangement and location of wave energy converters in order to minimise the cost of installation and infrastructure while maximising power output.

The Project, which has been supported by \$994,000 in funding from the Australian Renewable Energy Agency (ARENA), aims to reduce the cost of wave energy converters by producing the following outcomes:

1. New design guidelines and tools for how to optimally place wave energy arrays along coastlines.
2. Guidelines and tools to identify and design optimal secondary mooring line systems.
3. A probabilistic foundation design method for wave energy converters.
4. An integrated approach using the three points above to optimise wave energy array location and arrangement optimising power output, while minimising foundation cost.

Carnegie Chief Technology Officer, Jonathan Fievez, said the organisation was proud to be working alongside UWA in what will be a world first study.

“The research will focus on the interactions between wave energy, convertor location, array configuration, bathymetry and geotechnical characteristics to reduce costs,” he said.

“The outcomes of this project will then be applied to the development of our CETO 6 technology.”

Mr Fievez said despite the fact wave energy possesses unique characteristics that offer an advantage over other renewables, the production cost remains significantly higher.

“One effect of this study will be to optimise foundation placement and use with the aim of reducing the overall cost of foundations for CETO projects,” he said.

As announced last year, Carnegie is also working with UWA's Centre for Offshore Foundations Systems on a separate Australian Research Council (ARC) linkage project to research and develop more efficient anchoring systems. Both projects leverage UWA's world class capability for developing and proving innovative anchoring solutions for offshore applications.

Partnering with UWA is part of Carnegie's strategic approach to work with specialist research intuitions and industry partners to develop innovations designed to be incorporated into the CETO 6 technology which have the potential decrease costs and/or improve unit performance. Such research areas include foundations, advanced control systems and the power take off system.

Detailed agreements for this Project are expected to be finalised and signed over the coming months.



The University of Western Australia's Centre for Offshore Foundation Systems Centrifuge facility.

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FACT FILE

Carnegie

[Carnegie Wave Energy Limited](#) is an Australian, ASX-listed (ASX: CWE) wave energy technology developer. Carnegie is the 100 per cent owner and developer of the CETO Wave Energy Technology intellectual property. Carnegie is focussed on commercial opportunities in key target markets including UK, Europe and remote islands.

CETO

The CETO system is different from other wave energy devices as it operates under water where it is safer from large storms and invisible from the shore. CETO technology characteristics include:

- Converts ocean wave energy into zero-emission electricity and desalinated water.
- Environmentally friendly, has minimal visual impact and attracts marine life.
- Fully-submerged in deep water, away from breaking waves and beachgoers.

ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the supply of renewable energy in Australia. ARENA invests in renewable energy projects, supports research and development activities, boosts job creation and industry development, and increases knowledge about renewable energy. ARENA has a portfolio of more than 240 supported projects and is actively seeking new projects to fund in 2016.

UWA/Centre for Offshore Foundation Systems

The University of Western Australia's Centre for Offshore Foundation Systems provides solutions to worldwide offshore foundation needs through high-quality and sophisticated modelling and experimental facilities. The Centre of one of the world's largest teams of internationally recognised researchers in offshore geomechanics.

For more information:
Dr Michael Ottaviano
CEO & Managing Director
Carnegie Wave Energy Limited
+61 8 9335 3993
enquiries@carnegiewave.com
www.carnegiewave.com

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