

## **ASX Announcement**

**Friday 25<sup>th</sup> July 2014**

### **Australian Research Council Linkage Project Awarded**

- **Carnegie and University of Adelaide partner on \$1.8m control systems project**
- **3 year project will explore control strategies for point absorbers such as CETO**
- **Improvements in power output of up to 3 times theoretically possible**

**Wave energy developer Carnegie Wave Energy Limited (ASX: CWE) is pleased to announce that it will partner with the University of Adelaide on a \$1.8m project part funded by an Australian Research Council (ARC) Linkage Grant to research and develop control strategies for wave energy converters.**

The three year project will specifically focus on understanding and developing novel control strategies tailored for submerged point absorber wave technologies, such as Carnegie's CETO. Control strategies for wave energy generators focus on maximising power output by matching the wave energy converter characteristics to the oscillating forces of the waves. It represents a significant opportunity to considerably reduce the cost of energy by increasing power output with minimal additional capital expense.

Carnegie's Chief Technology Officer, Jonathan Fiévez said:

"Optimising the control characteristics of CETO is analogous to achieving maximum height on a swing by pushing the person on the swing at just the right time in the cycle. Research to date has demonstrated that the theoretical increases in power output over systems with basic control can be up to three times with only modest additional capital expense."

"Through this new partnership, control schemes will be identified, optimised and tested to demonstrate the real-world improvement which can be incorporated in the Carnegie's technology for CETO 6 and beyond. We're looking forward to collaborating with University of Adelaide on this significant opportunity".

University of Adelaide was awarded a \$259,000 Linkage project grant from the Australian Research Council to support this project. This grant funding will be complemented by Carnegie's cash contribution (\$66,000) and in-kind contributions to the project, as well as University of Adelaide's cash and in-kind contributions. Carnegie engineers will work with University of Adelaide to develop control systems to improve the performance of the CETO technology, which could then be demonstrated as part of Carnegie's CETO 6 Project. Among other benefits, the design of the CETO 6 technology offers opportunities for control not previously possible in CETO 5 and earlier generations of the technology.

### **About Carnegie**

[Carnegie Wave Energy Limited](#) is an Australian, ASX-listed (ASX:CWE) wave energy technology developer. Carnegie is the 100% owner and developer of the CETO Wave Energy Technology intellectual property.

### **About 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. The technology is capable of generating power onshore or offshore depending upon the specific characteristics of a project site.

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, and unaffected by storms.

### **CETO 6 Project Fact File**

- The Project comprises the design, construction, deployment and demonstration of three CETO 6 units in a grid-connected, up to 3MW peak installed capacity wave energy project at Garden Island, Western Australia.
- The CETO 6 Project is supported by \$11m in Australian Government funding through the Australian Renewable Energy Agency's Emerging Renewables Program.
- The CETO 6 Project is supported by a five year \$20 million loan facility from the Australian Clean Energy Finance Corporation.
- Utilises Carnegie's fully submerged and commercially proven CETO wave energy device.
- The clean, renewable energy generated by the Project will be sold to the Australian Department of Defence at Australia's largest naval base, HMAS Stirling, on Garden Island in Western Australia.

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