

ASX Announcement

Wednesday, 23rd July 2014

Carnegie's Perth Project key to CSIRO and ARENA project

- **CSIRO secures \$1.3m ARENA funding for a national wave resource modelling, mapping and impact assessment**
- **Novel research to be applied to Carnegie's Perth Wave Energy Project**

Wave energy developer Carnegie Wave Energy Limited (ASX: CWE) is pleased to announce that it will be part of a \$1.3m national study undertaken by Australia's premier science agency, the CSIRO, to develop a wave energy atlas and improve the assessment of wave energy extraction on the marine environment .

The Australian Government's independent funding agency for emerging renewable technologies, the Australian Renewable Energy Agency (ARENA) today announced \$1.3 million of funding support for the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to undertake the innovative wave resource mapping and modelling project.

Carnegie's Perth Wave Energy Project, off Garden Island in Western Australia, will be monitored using in-water oceanographic sensors, and the impacts of energy extraction assessed using computation modelling, allowing CSIRO to establish best practice guidelines for assessing the potential impact of wave energy plants.

ARENA CEO Ivor Frischknecht said;

"This project builds on CSIRO's previous work and is an important step forward in enabling more wave energy projects to come to the fore in Australia. Such a tool would be of tremendous value for an emerging industry and for anyone assessing the viability of wave power.

Australia has some of the best wave resources in the world and we're only just starting to tap into the ocean's potential to produce reliable, renewable energy."

Carnegie's Project Development Officer, Tim Sawyer said,

"This project offer tremendous value to Carnegie and the broader industry, as it will provide an accessible tool to characterise Australia's enormous untapped wave energy resource, and develop a methodology to assess the potential impact of wave energy extraction on the environment. Carnegie is keen to embrace and share knowledge of its experiences to help the industry move forward."

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 ARENA

ARENA was established by the Australian Government as an independent agency on 1 July 2012 to make renewable energy technologies more affordable and increase the amount of renewable energy used 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.

About CSIRO

As Australia's national science agency CSIRO has been pushing the edge of what's possible for over 85 years. Today the organisation has close to 6,500 talented people working out of 58 centres in Australia and internationally. Their people work closely with industry and communities to leave a lasting legacy. Collectively, CSIRO's innovation and excellence places them in the top ten applied research agencies in the world.

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. Power can be generated either offshore or onshore. The fully submerged buoys can drive seabed pump units deliver high pressure fluid onshore via a subsea pipe to standard hydroelectric turbines, generating zero-emission electricity. The high-pressure water can also be used to supply a reverse osmosis desalination plant, replacing or reducing reliance on greenhouse gas-emitting, electrically-driven pumps usually required for such plants. Alternatively, the movement of the buoys can drive pumps and generators offshore that are contained within the buoy itself with power delivered back to shore through subsea cables.

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.



For more information:

Dr Michael Ottaviano

CEO & Managing Director

Carnegie Wave Energy Limited

+61 8 9486 4466

enquiries@carnegiewave.com

Website: www.carnegiewave.com