

ASX ANNOUNCEMENT

31 October 2018

Report to Shareholders for the Quarter Ended 30 September 2018

Highlights:

- \$2.6 million Albany Wave Energy Project Milestone payment agreed and received
- Solar panel installation completed at Northam Solar Farm
- €1 million Collaboration Agreement signed with global renewables player Enel Green Power
- Sale and Purchase Agreement for the acquisition of Energy Made Clean by Tag Pacific Limited renegotiated and signed

1. CETO Wave Energy

Wave Energy Collaboration with Enel Green Power

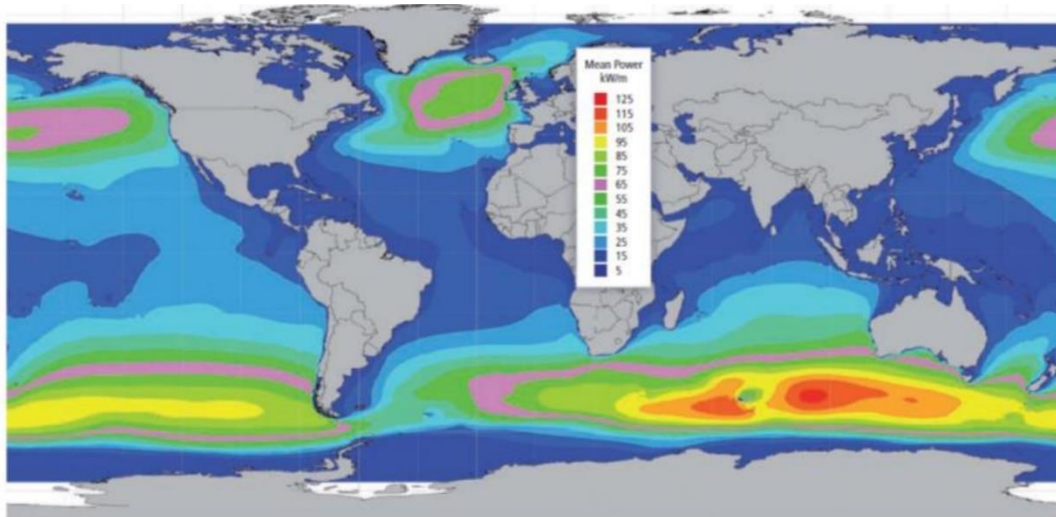
In July, Carnegie signed a Collaboration Agreement with global renewables player Enel Green Power (EGP) in which EGP will contribute €1 million (AU\$1.6 million) to the research, development and deployment of the CETO wave energy technology.

Enel Green Power (EGP) is the renewable energy division of the Enel Group, one of the largest energy companies in the world. EGP is a global leader in renewable energy with a presence in Europe, the Americas, Asia, Africa and Oceania. It manages around 42,000 MW of renewable energy plants across wind, solar, geothermal and hydropower, and is at the forefront of integrating innovative technologies into renewable power plants.

Carnegie and EGP will collaborate on the development and testing of the CETO technology, the Albany Wave Energy Project and future CETO projects. EGP will contribute €1 million (AU\$1.6 million) to the development of CETO across a number of knowledge sharing milestones.

Carnegie and EGP will also work together to identify, develop and invest in opportunities for CETO across Australia, Europe and internationally.

Wave energy remains one of the largest, untapped renewable resources globally. The World Energy Council (2016) forecasts installed capacity of ocean energy of up to 62,000MW by 2040. Ocean Energy Europe forecasts global market for ocean energy could see 337GW of installed capacity by 2050 incorporating wave, tidal, and ocean thermal conversion. Of this, around 188GW is expected to be wave energy.



Global Wave Energy Resource Distribution (Source: World Energy Council, 2016)

Albany Wave Energy Project (AWEP) Status

Carnegie has now received a \$2.625 million milestone payment from the WA State Government as part of a variation to the first \$5.25m AWEP project milestone. The remaining procurement activities associated with the balance of the first milestone, and more generally, the timing of the delivery of AWEP is being impacted by the uncertainty associated with the proposed changes to the Federal Government's R&D Tax Incentive scheme.

Carnegie continues working to gain clarity around the proposed R&D tax changes and advocate for the Federal Government to consider revising the proposed annual cap to avoid negative impacts on innovation in Australia. Any changes to the R&D tax incentive could lead to a delay in AWEP and/or the requirement to seek additional funding. Carnegie's ability to continue to progress the project is constrained until this uncertainty is resolved.

In September, the Bill that includes the proposed R&D Tax changes [Treasury Laws Amendment (Making Sure Multinationals Pay Their Fair Share of Tax in Australia and Other Measures) Bill 2018] was referred to the Federal Senate Economics Legislation Committee for an inquiry. Carnegie looks forward to engaging in this process and seeing the Committee's report at the start of December.

Carnegie intends to present the WA State Government with an updated funding plan and timing for the Albany Wave Energy Project. The State Government will then assess whether the Company has the financial capability, in a potentially altered Federal R&D tax incentive environment, to complete the project.

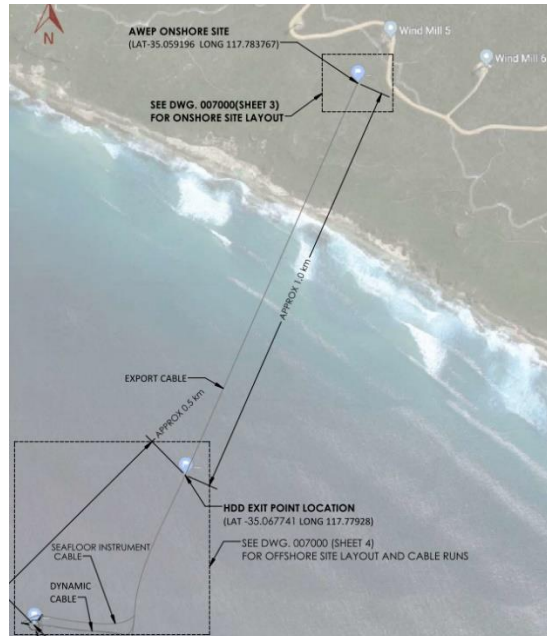
Albany Wave Energy Project Activities

A high-quality dataset has been collected and analysed from the offshore geophysical survey undertaken in June. Results of this survey, experience gained during previous projects with similar geological profiles and access to data from onshore boreholes in the Sandpatch area has allowed Carnegie to develop a detailed understanding of the geology in the area. This represents crucial information that feeds into the design of foundations and cable shore-crossing for the CETO Unit and other wave energy technologies to be deployed in Albany.

Carnegie and University of Western Australia continue their collaboration through the Wave Energy Research Centre (WERC) on wave resource modelling. This work delivers detailed understanding of

the wave conditions in the Torbay area needed for the development of the Project and providing useful data to future wave energy developers deploying at the Albany site.

These activities and others previously disclosed such as the grid connection studies, shore crossing design, environmental surveys and permitting and approvals, has allowed Carnegie to establish the site layout for the project.



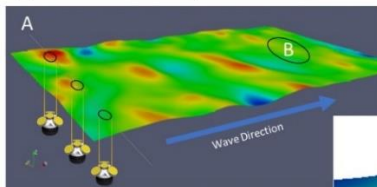
Proposed AWEP offshore and onshore site layouts

CETO Development & Innovations

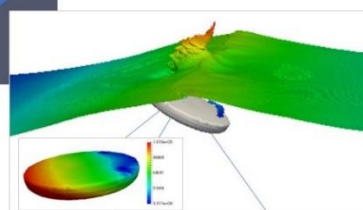
Carnegie continues to progress the development of CETO 6 for the Albany Wave Energy Project, including exploring a number of major innovation opportunities. These innovations open up the potential for significant increases in the performance of CETO, through greater energy capture, more efficient conversion into electricity, higher system reliability and reduction in cost.

These improvements are being enabled through advancement in both the hardware and software available as well as through the more recent ability to apply new techniques such as Machine Learning. Machine Learning is a subset of Artificial Intelligence and has the potential to dramatically change the way CETO is designed and operated. Carnegie is in discussions with a number of suppliers and funding bodies in regard to the ongoing development and application of Machine Learning to CETO.

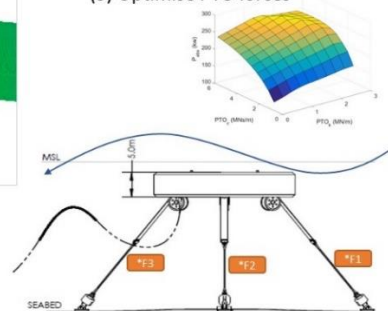
(1) Predict waves in space and time



(2) Translate waves into forces on the structure



(3) Optimise PTO forces



Application of machine learning on the development and operation of CETO

The Power Take-Off system is the part of CETO that converts the buoy motion into electricity. The Carnegie team have been working on integration of advanced electrical generators that are lighter, smaller, higher efficiency and lower cost than the hydraulic equivalent. These machines are being developed principally for wind turbine, tidal turbine and electric vehicle applications. Carnegie is engaged with a number of European suppliers, funding agencies and other wave energy developers who are actively working in this field.

2. Merger of Energy Made Clean and MPower

During the quarter, Carnegie and Tag Pacific Limited (Tag) agreed to renegotiate the terms of the Sale and Purchase Agreement in relation to Energy Made Clean (EMC). The renegotiation enabled Carnegie to reach a revised agreement with Tag to eliminate the requirement to contribute cash to the transaction at the time of completion. The previous agreement anticipated a cash payment in the order of \$2 million from Carnegie to Tag, to compensate for a reduction in the Net Tangible Assets being transferred to Tag which would have been determined at the time of completion plus any adverse movements in project profit margins which would have also been adjusted at the time of completion. This revised agreement provides similar to better value for shareholders compared to the original agreement and allows Carnegie to retain cash to support on-going operations.

Subsequent to the end of the Quarter, Carnegie and Tag then entered into an amended Sale and Purchase Agreement for the sale of EMC on October 24th. Under the revised sale agreement, Carnegie will receive 17.5% of the diluted issued capital of Tag (Consideration Shares) having taken into consideration a Tag capital raising of not less than \$4 million, subject to certain conditions precedent as previously announced. At completion, Carnegie will receive a Convertible Note, convertible into the Consideration Shares. Carnegie will not proceed with a Capital Reduction and Distribution in Specie of the Consideration Shares. The shares will be held by Carnegie and will be subject to a 24 month voluntary escrow period following completion. The requirement to hold the shares in voluntary escrow was a requirement from Tag to reach agreement on the revised terms

3. Projects under construction during the quarter:

- **Northam Solar Farm** – The 10MW Northam Solar Farm is being constructed approximately 100kms east of Perth. Construction works are now well advanced and the project remains on track to commence commercial operations in the last quarter of the 2018 calendar year as previously communicated. All of the solar modules and tracking systems are now installed, all four medium voltage substations and inverters are installed and grid connections works is complete. Site acceptance testing is also well progressed ahead of project commissioning.



Northam Solar Farm in September 2018 (left) and construction team finishing the last panel (right)

- **Delamere Microgrid Project** - The solar and battery microgrid at the Delamere Air Weapons Range in the Northern Territory of Australia is now complete and the battery energy storage system (BESS) has been operational since August 2018. Final practical completion is expected to be achieved in Q4 once other works associated with the base upgrade are further advanced.



Delamere Microgrid Project

- **Garden Island Microgrid Project** – The 2MW solar PV and 2MW/0.5MWh battery system construction and pre-commissioning of both systems is complete on Garden Island. Final cabling installation work has now also been completed. Delays continue to be experienced due to parallel infrastructure upgrades at HMAS Stirling however complete system testing is underway ahead of commissioning and final approvals from both Department of Defence and Western Power. Carnegie maintains its 100% ownership of the Garden Island Microgrid.



Garden Island Microgrid at HMAS Stirling

- **CSIRO Pathfinder Microgrid** - The Microgrid System at the CSIRO's Square Kilometre Array Pathfinder project achieved practical completion in August 2018 and has been operational since then. The system is remotely monitored 24/7 by the operations and maintenance team who are also managing a punch-list of works that will be completed during the next 12 month period.



CSIRO Pathfinder Microgrid

4. Financial Activities

Partial Equity Sale of Northam Solar Farm to IBA

Carnegie's major co-owner in the Northam Solar Farm, Indigenous Business Australia (IBA), will acquire an additional stake from Carnegie for approximately \$2.5 million. The exact equity amount to be purchased will be determined following an independent valuation process. Carnegie continues to retain a share of the Northam asset which is a source of value for Carnegie to support the ongoing commercialisation of its CETO wave technology.

Cash Position and Liquidity

At the end of the Quarter, the Group had cash of approximately \$3.5 million including guarantee facilities of approximately \$1.9 million. In addition, the Company has existing capacity to draw on loan facilities of approximately \$5.1 million (subject to conditions) and undrawn government grants (subject to meeting performance milestones) of approximately \$31 million.

The Company recognises the current tightness in its overall cash position and is considering the need to make further divestments of equity held in projects and investigate other funding sources to ensure funding for ongoing operations and to meet business objectives.

5. Corporate Activities

Board and Management Structure

During the Quarter, the Company announced the departure of Chief Executive Officer and Managing Director Michael Ottaviano and the appointment of Jonathan Fiévez as Chief Executive Officer. In line with the Board's approach to reducing corporate overheads, Non-Executive Director Mark Woodall will retire from the Board at the forthcoming Annual General Meeting.

Annual General Meeting

The Annual General Meeting will be held at 9:00am on November 30th at Carnegie's Research Facility, 21 North Mole Drive, Fremantle, WA.

Conferences and Presentations

During the quarter, Carnegie staff presented at a number of targeted events including:

- All Energy Australia
- Ocean Energy Europe
- Australian Clean Energy Summit

About Carnegie Clean Energy Limited

[Carnegie Clean Energy Limited](#) is an Australian, ASX-listed (ASX: CCE) wave energy technology developer and solar/battery microgrid project developer. Carnegie is the 100% owner and developer of the CETO Wave Energy Technology intellectual property. Carnegie recently announced the merger of its battery/solar microgrid Engineering Procurement and Construction (EPC) company Energy Made Clean (EMC) with ASX-listed Tag Pacific.

About Energy Made Clean

Energy Made Clean is a leading solar and battery microgrid developer providing off-grid power and utility scale solutions. Recently named one of Australia's most innovative companies by the Australian Financial Review, EMC specialises in the delivery of mixed renewable energy microgrid projects, ideally suited to island, remote and fringe of grid communities. EMC offers an end to end renewable energy solution, dedicated to in-house research and development, custom design, construction, operation, maintenance and monitoring.

About Tag Pacific Limited

Tag Pacific Limited is a Sydney-based investment house listed on the Australian Securities Exchange with a focus on niche areas of the power industry. Tag has invested in a diverse range of companies and activities that have been brought together primarily to operate under the banner of MPower. The company's mission is to invest in the power industry in a manner that creates and enhances value over time.

About MPower

MPower is an Australian owned and operated subsidiary of Tag Pacific Limited and is an industry leader providing innovative, reliable products and power solutions on a national and international level. Our capabilities are like no other; we combine new and old technologies with a skilled and experienced workforce to create dependable products and power solutions that last the distance. Put simply, we have the energy to deliver and can create products and solutions from solar panels and batteries to engineering, technical support and full turn-key systems.

About the Energy Made Clean/ Lendlease Joint Venture Agreement

In December 2016, Energy Made Clean signed a 50/50 Joint Venture Agreement with Lendlease's Services business. By leveraging Lendlease's national footprint across Australia, this JVA is providing opportunities for EMC to increase its capacity to bid for and deliver a broader range of solar, BESS and microgrid opportunities within Australia, including increased access to the National Energy Market (NEM). Lendlease's Services business employs approximately 3,000 people and has a presence in every Australian state and territory.

About Northam Solar Project

The Build, Own and Operate 10MW Solar Power Station in Northam, Western Australia, will consist of approximately 34,000 solar panels constructed on 25 hectares of strategically located land to deliver approximately 24,000MWh of electricity per annum for at least the next 25 years. The system will also be utility scale battery storage ready. This will be the first large scale solar project to be delivered

by the EPC Joint Venture between Carnegie Clean Energy's wholly owned subsidiary Energy Made Clean and leading property and infrastructure company Lendlease.

About Indigenous Business Australia

IBA is a commercially focused organisation. Our vision is for a nation in which the First Australians are economically independent and an integral part of the economy.

Economic independence for Aboriginal and Torres Strait Islander peoples is at the heart of what we do. Our programs assist Indigenous Australians to buy their own homes, be successful in business and invest in commercial ventures that provide strong financial returns.

We're deeply invested in the financial success and economic independence of our customers and partners at every step of their journey - it's why we exist.

About Bookitja Pty Ltd

Bookitja Pty Ltd is part of Noongar Property Holdings Pty Ltd (PNF) and aims to provide a sustainable economic base for future generations of Whadjuk people who reside in the Perth region.

About Department of Primary Industries and Regional Development

The Department of Primary Industries and Regional Development (DPIRD) is committed to building vibrant regions with strong economies through jobs growth, economic growth and capable people. The Department is responsible for the effective planning, coordination and delivery of the State Government's regional development agenda. This includes the management of the Royalties for Regions investment program and maintaining effective relationships with key partners across government, industry and the community. The Western Australian State Government, via DPIRD, is investing \$15.75m in grant funding into the Albany Wave Energy Project and a further \$3.75m into the Wave Energy Research Centre via the University of Western Australia.

About ARENA

ARENA was established by the Australian Government to make renewable energy technologies more affordable and increase the supply of renewable energy in Australia. Through the provision of funding coupled with deep commercial and technical expertise, ARENA provides the support needed to accelerate the development of promising new solutions towards commercialisation. ARENA invests in renewable energy projects across the innovation chain and is committed to sharing knowledge and lessons learned from its portfolio of projects and information about renewable energy. ARENA always looks for at least matched funding from the projects it supports and to date has committed \$1.1 billion in funding to more than 270 projects. For more information, visit www.arena.gov.au

For more information

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