

## ASX Announcement

Wednesday, 21<sup>st</sup> October, 2015

### Ocean Energy Europe Presentation

Please find attached presentation delivered yesterday at the Ocean Energy Europe (OEE) conference in Dublin, Ireland by CWE UK's CEO, Mr. Tim Sawyer. The OEE conference is the biggest wave and tidal conference globally and includes the main European Ministers responsible for ocean energy from Scotland, Island, UK, Wales and France.

For more information:

Dr Michael Ottaviano

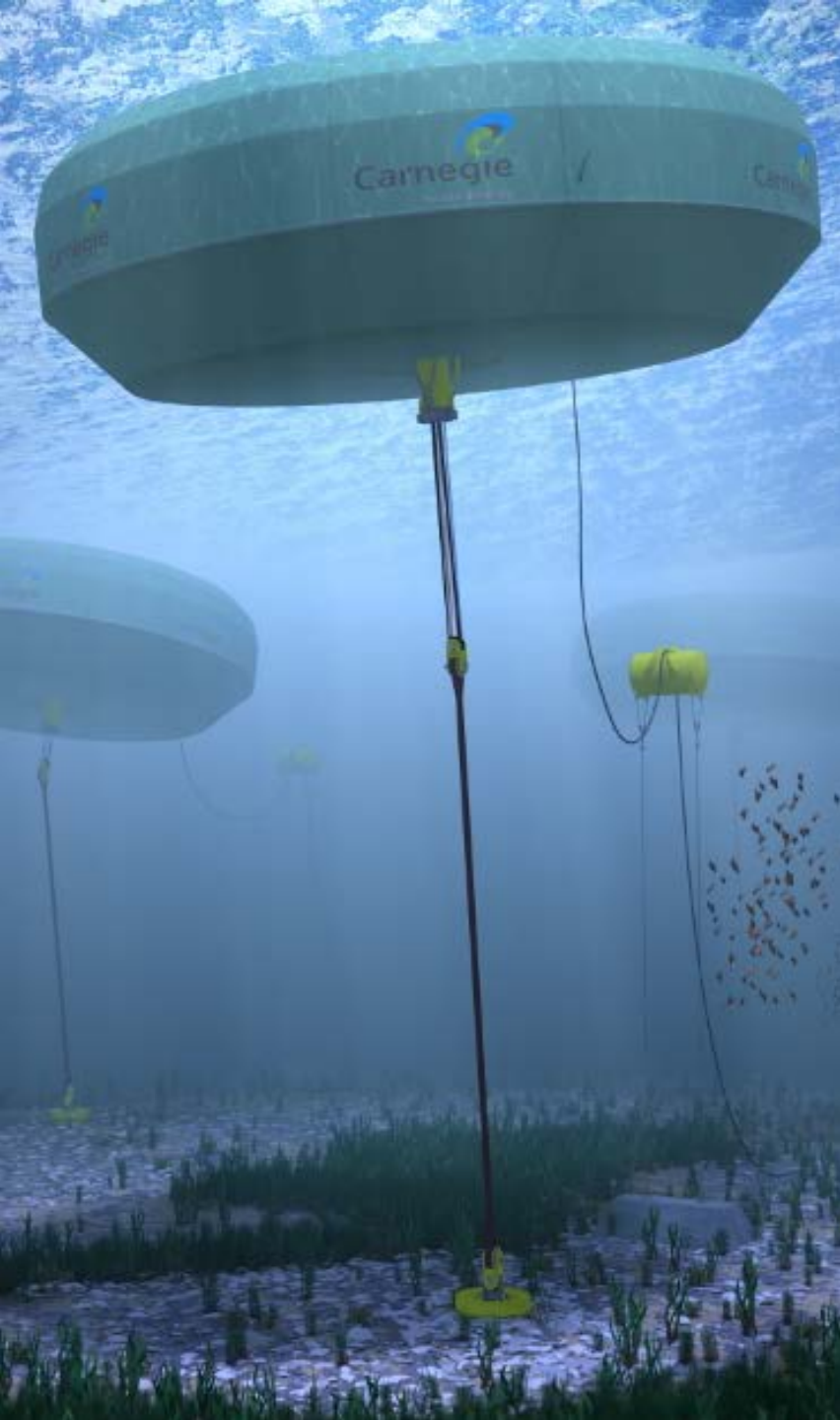
Managing Director

Carnegie Wave Energy Limited

(08) 9486 4466

[enquiries@carnegiewave.com](mailto:enquiries@carnegiewave.com)

Website: [www.carnegiewave.com](http://www.carnegiewave.com)



## CETO Progress & Next Steps

*Ocean Energy Europe*

*Tim Sawyer  
CEO, CWE UK  
20<sup>th</sup> October, 2015*



# Disclaimer

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The information contained herein has been prepared solely for informational purposes and is not an offer to buy or sell or a solicitation of any offer to buy or sell any security or to participate in any trading strategy or to enter into any transaction. If any offer of securities is made, it shall be made pursuant to a definitive offering memorandum prepared by or on behalf of any fund or other issuer which would contain material information not contained herein and which would supersede this information in its entirety.



# Carnegie Overview

- Owner and developer of “CETO” wave energy technology
- Listed on the Australian Stock Exchange (ASX:CWE)
- 44 engineering, commercial, administration staff
- EDF EN first licensee
- AU\$118m spent to date on CETO
- 100% owned subsidiaries in the UK, Ireland and Chile



# Perth Wave Energy Project



- Demonstrated CETO 5 technology including:
  - Three WECs
  - Power delivery to grid
  - Wave powered, reverse osmosis desalination
  - <1 day CETO WEC installation
- >14,000 operational hours across the 3 units since November 2014, across 4 seasons
- \$33m budget
- Designed and delivered by Carnegie

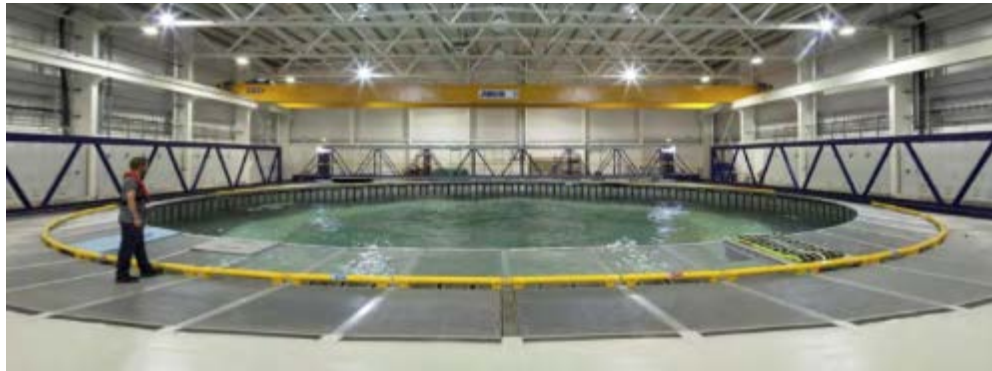


- **UK/Europe** – 5 grid-connected, pre-consented, pre-developed wave energy sites either operating, in construction or under development. All seeking a viable wave energy technology.
- **Islands** – CWE relationships with a small number of viable islands aimed at making islands “CETO ready” while CWE makes CETO “Island ready”



# CWE UK activities to date

## CETO 6 testing at FloWave, Edinburgh

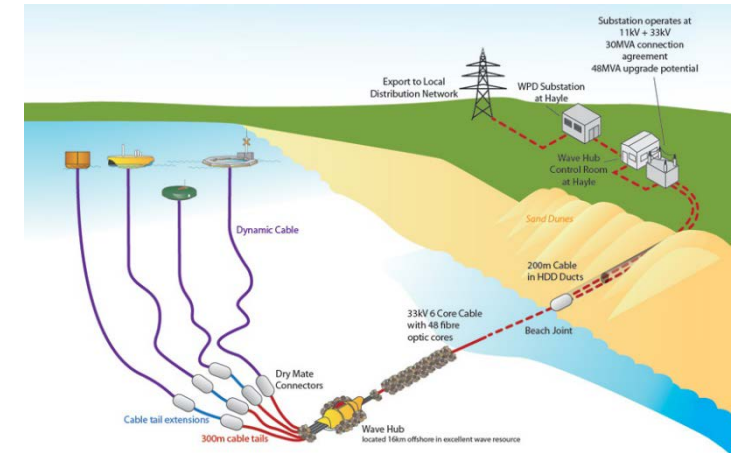


## WES funded WavePOD with Aquamarine & Bosch Rexroth



OEE Board Member,  
DECC MEPB, ReUK &  
MSG member

## Wave hub berth site

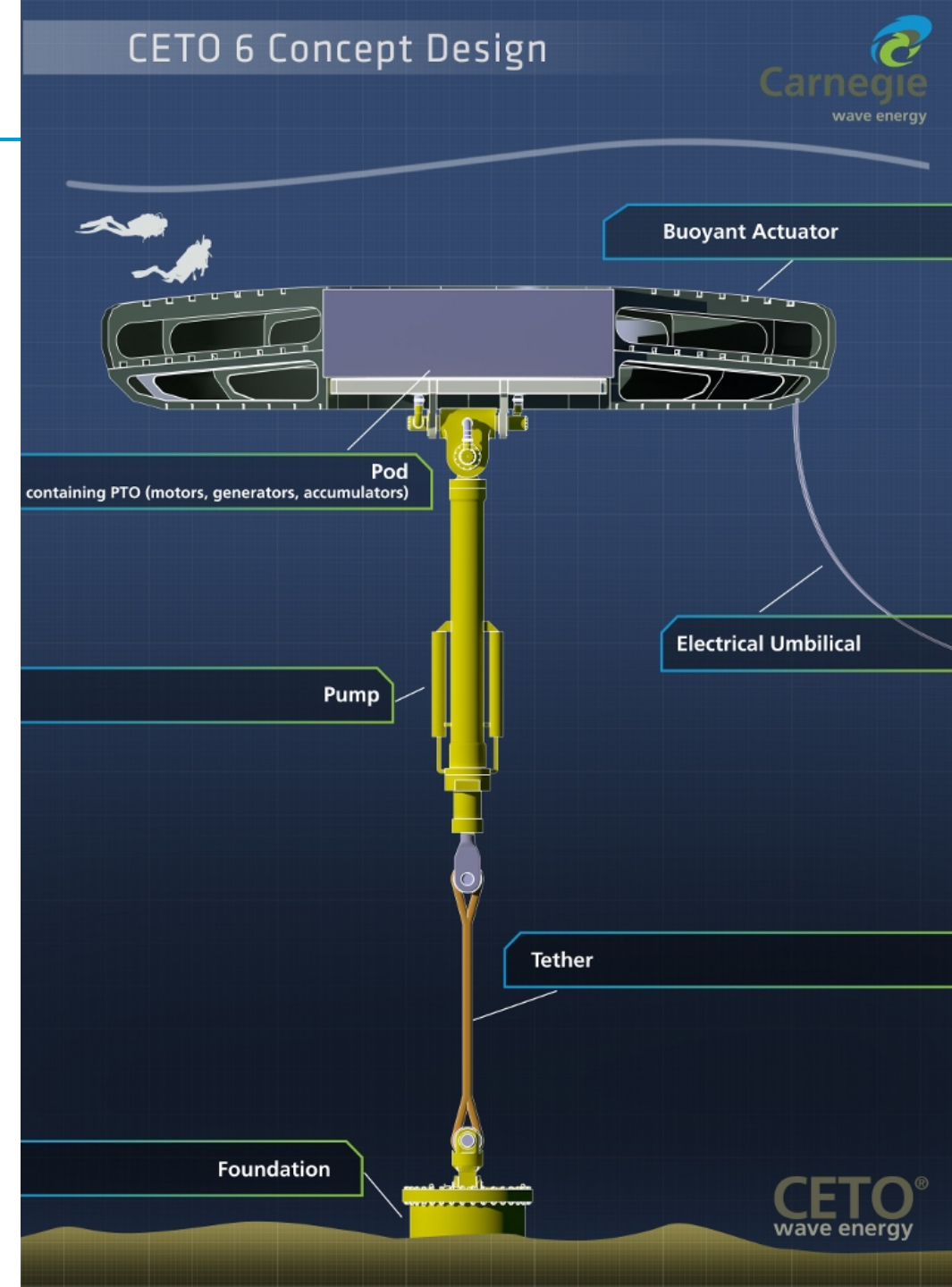


## Collaboration Agreement with Atlantis



# CETO 6 Concept Design

- Development based on:
  - 14,000 CETO 5 in-ocean operational hours and data analysis
  - CETO 6 wave tank testing at FloWave, Edinburgh using scale model
  - Internal modelling and design development
  - Engagement with UK/EU and Australian supply chain
- Approximately 4 times the rated capacity of CETO 5 generation (nominal 1MW)
- Power generation inside the buoyant actuator allows more advanced control capability
- Rapid installation and retrieval (no offshore heavy lifts)
- Electrical export cable delivers power onshore avoids hydraulic transmission losses
- Tidal range compensation
- Nearshore and more distant to shore wave sites suitable





# Current and Upcoming Developments

- CETO 6 Australia grid connected project underway – construction commences 2016 at Garden Island
- Continued R&D activities in Australia & UK/EU
- Second CETO 6 project to be in UK. Construction/ commissioning targeting 2017/2018.
- European and UK Project Development
- Island Project Development

