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Market Announcements Platform  
ASX Limited,  
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**AGREEMENT SIGNED WITH LEADING U.S. WAVE TECHNOLOGY UNIVERSITY  
TO FACILITATE MAJOR GOVERNMENT FUNDING OPPORTUNITIES**

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- Memorandum of Understanding signed between Stonehenge and Cal Poly, California's leading Polytechnic University to facilitate joint applications for two major funding opportunities offered by the U.S. Department of Energy (**DOE**)
  - Two government funding options for approval:
    - DOE total prize pool for "[Wave Energy Prize](#)" competition of **US\$2.25 million**
    - Invited award application submitted to the DOE by Calwave, as previously advised on 29 May 2015, **US\$1.5 million**
  - Strong endorsement from leading U.S. University (Cal Poly and the CalWave team), pioneers in the development of U.S. wave energy technology
  - Positions the Protean technology across the major proponents of wave energy in California and the broader US community to accelerate the development, and support the commercialisation, of the Protean technology
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Stonehenge Metals Limited, (ASX:SHE) (**Stonehenge**, or the **Company**) is pleased to advise that it has entered into a Memorandum of Understanding (**MOU**) with the California Polytechnic University at San Luis Obispo (**Cal Poly**) to support joint applications for two major funding opportunities with a combined total value pool of US\$3.75m (AU\$4.8m) being offered by the U.S. Department of Energy (**DOE**).

The MOU includes the previously announced funding application for US\$1.5m as advised on 29 May 2015. This application was in response to a specific request made by the DOE, to Cal Poly, for "follow-on funding" to support their wave energy program. In addition, Cal Poly and wave technology experts from the CalWave team have now also agreed to work with Stonehenge and Sean Moore to submit an application for the \$US2.25m (AU\$2.9m) total prize pool for the DOE funded "Wave Energy Prize" competition. The DOE anticipates that the value of each wave energy prize grant award will be between \$US250,000 (AU\$320,000 and \$US1.5m (AU\$1.9m).

Stonehenge is well positioned to serve as a contributing wave energy converter technology proponent for both of these funding applications and, if successful, the resulting projects.

Stonehenge MD, Bruce Lane said:

*"We are extremely pleased to be able to formalise a broader partnership with Cap Poly and the team at CalWave. CalWave is one of the world's best wave energy technology, and pioneers in the industry. The MOU with Cal Poly not only solidifies our partnership with a market leader in wave technology, it positions the Protean wave energy technology to potentially benefit from the proactive funding programs provided by the U.S. Department Of Energy.*

*Over the years, the DOE has been an active supporter in the US wave energy sector, providing a number of funding initiatives to pioneers in the industry. We are excited to jointly collaborate with a top tier team operating at the forefront of wave energy development in the US, and to have the potential to receive funding from the DOE, which will accelerate the development and commercialisation of the Protean wave energy converter technology.”*

CalWave Principal Investigator, Honourable Dr. Sam Blakeslee said: “We are delighted here at Cal Poly, through its Institute for Advanced Technology and Public Policy, to join forces with Stonehenge in the pursuit of U.S. Federal and California State funding opportunities to progress the commercialization of wave energy in the U.S. We hope that the body of knowledge already created within the CalWave project, especially in terms of California environmental permitting and marine / port engineering, will prove to be very relevant and useful in the process commercialising the Protean and other wave energy technologies in the US.”

For further information see [www.stonehengemetals.com.au](http://www.stonehengemetals.com.au), [www.proteanwaveenergy.com.au](http://www.proteanwaveenergy.com.au) or contact:

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**ABOUT CAL POLY’S INSTITUTE FOR ADVANCED TECHNOLOGY AND PUBLIC POLICY**

The Institute for Advanced Technology and Public Policy (IATPP) at the California Polytechnic University at San Luis Obispo (Cal Poly) was founded by former California State Senator Sam Blakeslee who serves as its Founding Director. With a background as a practicing scientist and successful business owner as well as a respected legislator, Blakeslee observed firsthand how public policy is often developed with little insight or understanding of the potential transformative benefits of emerging technologies. In fact, laws, regulations and standards often impede new solutions offered by emerging technology.

The mission of the Institute is to develop and promote practical solutions to real-world problems by informing and driving public policy through advanced technology. Interdisciplinary teams of students, faculty, industry leaders, State and Federal governments and policy experts adept at removing barriers apply technology to craft practical yet transformative solutions ripe for implementation.

**Independent Advisors to IATPP**

- Honorable George P. Schultz, IATPP Advisor, U.S. Secretary of State (former).
- Honorable Gavin Newsom, IATPP Advisor, California Lieutenant Governor.
- Mike Florio, IATPP Advisor, California Public Utilities Commissioner.
- Carl Guardino, IATPP Advisor, President and CEO of Silicon Valley Leadership Group.
- James Boyd, IATPP Advisor, California Energy Commissioner (former).
- Dian Grueneich, IATPP Advisor, California Public Utilities Commissioner (former).
- Delaney Hunter, IATPP Advisor, Director of Governmental Affairs, California Public Utilities Commission (former).

**ABOUT CALWAVE**

CalWave is one of a number of projects created under the auspices of the [Institute for Advanced Technology and Public Policy](#) (IATPP) at California Polytechnic University at San Luis Obispo (Cal Poly).

The CalWave project concept was originally developed by William Toman to leverage the wave energy work that he directed while at Pacific Gas and Electric Company. Its current form was created partly in response to the U.S. Department of Energy’s (DOE) indication of its intention to accelerate the development of wave-energy technologies in the United States and to construct a world-class National Wave Energy Testing Facility where technology manufacturers can pilot their devices in a true commercial, grid connected

marine setting. In June 2014, Cal Poly's IATPP received a \$750,000 (AU\$960,000) grant (CalWave) from DOE to assess the feasibility of siting the planned National Wave Energy Test Facility in California. A map of the CalWave Feasibility Study project area showing five candidate sites can be accessed [here](#).

As part of the Feasibility Study, the project team is assessing preliminary facility design, determining the environmental studies and permitting requirements, and developing a public stakeholder engagement plan for project implementation, in anticipation of the next phase being funded by DOE.

The CalWave grant awarded to IATPP at Cal Poly, combined with other cost share matching funds, is being used to estimate the costs, schedule and stakeholder impacts related to the development, construction and operation of the National Wave Energy Testing Facility.

Cal Poly has provided an application requested by DOE for an extension of the original grant via a second funding round of US\$1.5m (AU\$1.9m) to fund the CalWave project for another 12 months.

**The CalWave leadership team includes:**

- Honorable Dr. Sam Blakeslee, Project Director, Founding Director of IATPP, Former California State Senator and Assemblyman as Principal Investigator.
- William Toman, Project Manager, President of Stonehenge's US subsidiary, Protean Wave Energy Inc. and seconded to IATPP as Project Manager.
- Dr. Dean Wendt, Faculty Scholar, Dean of Research & Director of the Center for Coastal Marine Sciences at Cal Poly.
- Dr. Dale Dolan, Faculty Scholar, Hood Associate Professor of Electrical Engineering at Cal Poly.
- Dr. Craig Baltimore, Full Professor of Architectural Engineering at Cal Poly.

**ABOUT THE DOE WAVE ENERGY PRIZE**

The Wave Energy Prize competition is a public prize challenge sponsored by the [U.S. Department of Energy \(DOE\)'s Water Power Program](#). The prize is designed to increase the diversity of organizations involved in Wave Energy Converter (WEC) technology development, while motivating and inspiring existing stakeholders. DOE envisions this competition will achieve game-changing performance enhancements to WEC devices, establishing a pathway to sweeping cost reductions on a commercial scale.

The wave energy industry is young and is experiencing innovations as evidenced by a sustained growth in patent activity. While the private industry is developing these early-concept WEC devices through design and benchtop prototype testing, funding is hard to secure for performance testing and evaluation of WEC devices in wave tanks at a meaningful scale. This is a problem for the industry since scaled WEC prototype tank testing, validation, and evaluation are key steps in the advancement of WEC technologies through the technical readiness levels to reach commercialization.

More than 60 teams have registered for the Wave Energy Prize. Prize purses available to the winner(s) of the Wave Energy Prize competition will be:

- **Grand Prize Winner:** Team ranked the highest after testing of the 1/20th scale WEC device model at the Carderock MASK Basin - US\$1,500,000 (AU\$1.9m)
- **2nd Place Finisher:** Team ranked second after testing of the 1/20th scale WEC device model at the Carderock MASK Basin - US\$500,000 (AU\$640,000)
- **3rd Place Finisher:** Team ranked third after testing of the 1/20th scale WEC device model at the Carderock MASK Basin - US\$250,000 (AU\$320,000)

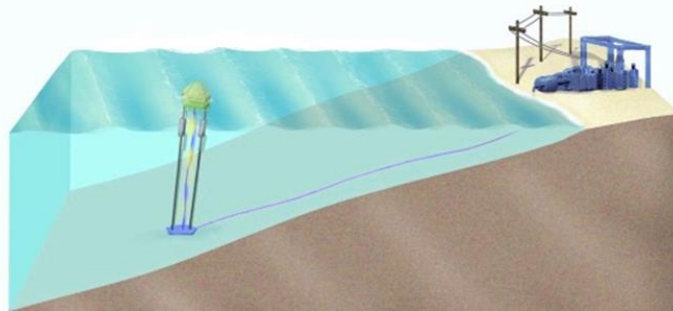
Further details about the DOE Wave Energy Prize can be found at <http://waveenergyprize.org/>

## ABOUT THE PROTEAN WAVE ENERGY CONVERTER (WEC) TECHNOLOGY



Stonehenge has entered into an option agreement to purchase the Protean WEC technology. The Protean WEC system is based upon a point-absorber wave energy converter buoy device which floats at the water surface and extracts energy from the waves by the extension and retraction of a tether to its anchoring weight on the seabed. The device is unique in that it optimises the conversion of energy from waves at the surface through **all six degrees of wave movement**.



**Figure 1:**  
Protean WEC  
technology



The Protean WEC has been developed to use compact architecture to produce power from a small, low cost, scalable design targeted at keeping the projected levelised cost of energy (LCOE)<sup>1</sup> down. The Protean WEC has been designed to be cost competitive to manufacture, deploy, maintain and retrieve. The future plans for the Protean WEC include the deployment of a pre-commercial demonstration of a dynamic, configurable and scalable power array prior to moving the technology into early commercialisation. During the Option period the Stonehenge assessment program aims to:

1. **Refine** the tried and proven scale device to produce a suitable pre-commercial model;
2. **Create** a scalable power array so as to provide the power requirements of a prospective customer;
3. **Test** the scalable power array for its potential to deliver cost effective power,
4. **Verify** the results, including commissioning of an independent expert to qualify the testing results; and
5. **Commence** commercialisation of the scalable array for small to medium customers.

### Protean Wave Energy Converter (WEC) Design, Fabrication and Deployment

<b>PAST</b> Successfully Tested Prototype	<b>PRESENT AND FUTURE</b> Deploy Demonstration Wave Farm
	
<ul style="list-style-type: none"> <li>➤ 1.5m wide proof-of-concept device successfully tested.</li> <li>➤ Device operation validated in varied depths and sea states.</li> <li>➤ Design principles independently verified from test results.</li> <li>➤ Simple patented deployment system demonstrated.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Identify and secure deployment sites and customers.</li> <li>➤ Deploy "proof of commercial applicability" device.</li> <li>➤ Demonstrate key design improvements.</li> <li>➤ Deploy an array (farm) of Protean WEC devices.</li> <li>➤ Confirm Protean as scalable power/water solution.</li> </ul>

For further information visit: [www.proteanwaveenergy.com.au](http://www.proteanwaveenergy.com.au) or [www.stonehengemetals.com.au](http://www.stonehengemetals.com.au)

<sup>1</sup> Levelised cost of energy is one of the industry's main metrics for the cost of electricity produced. It accounts for all of a system's expected lifetime costs (incl. construction, finance, fuel, maintenance, tax, insurance & incentives), which are then divided by the system's lifetime expected power output (kWh) & discounted for inflation & time cost of money.