Stonehenge METALS LTD

ASX Code: **SHE**

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Market Announcements Platform
ASX Limited,
Exchange Centre,
20 Bridge Street, Sydney NSW 2000

protean wave energy

COMMERCIAL PROTEAN™ WAVE FARM APPROVAL FOR THE MALDIVES

- Hanimaadhoo Island, Maldives commercial wave farm approval
- Total annual power consumption on the Island of approx. 5,256,000 kWh with annual revenue potential estimated to be AUD$1.58 million[1]
- Initial expressions of interest received for up to 500,000 kWh p.a. from 100 local power users
- Maldives has a total installed capacity of 141MW of diesel generators[2]

Stonehenge Metals Limited (**Stonehenge** or the **Company**) has entered into an exclusive option to acquire 99% of Clean Energy Maldives Pvt Ltd (**CEM**). The management of CEM has the approval and local support to facilitate the establishment of a commercial wave energy converter power generation and seawater desalination facility off the coast of Hanimaadhoo Island, Maldives (**Island**). This project has been designed to provide up to an estimated peak power potential of 2,000 kW and a desalination potential of 50kL per day (**Wave Farm Project**).

Early indications from potential power customers are very encouraging with the first round expressions of interest (**EoI**), supported by power purchase history, received from over 100 of the Island's estimated 500 businesses and residences. These non-binding EoI are for the supply of electricity from the Wave Farm Project at a proposed tariff of 3.5 Rufiyaa (approximately AUD$0.30) per unit[3]. The Company and CEM are working to secure further expressions of interest from potential customers, including some of the island's largest power users, over the coming weeks.

Construction of the Hanimaadhoo Wave Farm Project is conditional upon the acquisition of CEM and successful deployment of the 30-buoy pre-commercial demonstration wave farm off the coast of Western Australia. Upon successful completion of the demonstration wave farm and a positive feasibility study, the Company plans to install a commercial pilot Protean™ wave farm off Hanimaadhoo Island with the primary objective of supplying businesses and residents with sustainable, clean and reliable power.

The Hanimaadhoo Wave Farm Project is the next major step in the Company's early commercialisation program for the Protean WEC technology. The project establishes a core pillar in the Company's commercialisation strategy for applying the Protean in the island energy market.

[1] Based upon an electricity price of AUD$0.30 per kWh
[2] 20131222-Pub-Maldives-Energy-Outlook-for-Inhabited-Islands-2013.pdf
[3] A unit is equal to 1 kWh of electrical energy

Stonehenge MD, Bruce Lane said *"The agreement with Clean Energy Maldives paves the way for a commercial application of the Protean™ technology in the Maldives. The Maldives represents a significant market opportunity for the Company with a total annual power consumption of over 428GWh[4] equating to an annual revenue potential of AUD$128million[5]. The Company is excited to work with CEM and its management who have been instrumental in garnering the very strong support we have for the project from the local government and community on the Island."*

Transaction Details

Stonehenge has entered into a binding agreement with Clean Energy Maldives Pty Ltd (**CEM**) that allows Stonehenge (or its nominee) to acquire 99% of the issued capital in CEM for consideration of 250,000 Stonehenge shares (**CEM Option Agreement**). Settlement of the CEM Option Agreement (**Settlement**) is subject to a number of preconditions, detailed in Schedule 1, including the Company successfully re-complying with the ASX Listing Rules and completing the acquisition of Protean Energy Australia Pty Ltd (**Conditions Precedent**).

CEM and Stonehenge will continue to work to satisfy the Conditions Precedent and to seek further expressions of interest from potential new customers on the Island over the coming weeks in anticipation of Stonehenge's recompliance with the ASX Listing Rules and Settlement of the CEM Option Agreement.

Stonehenge expects to dispatch a notice of meeting in due course to approve a number of matters including and related to, the proposed change in nature and scale of the Company under Chapters 1 and 2 of the ASX Listing Rules.

For further information see www.stonehengemetals.com.au, **www.proteanwaveenergy.com.au** or contact:

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[4] "Maldives Scaling Up Renewable Energy Programme in Low Income Countries (SREP) Investment Plan 2013-2017" http://www.environment.gov.mv/v1/publication/

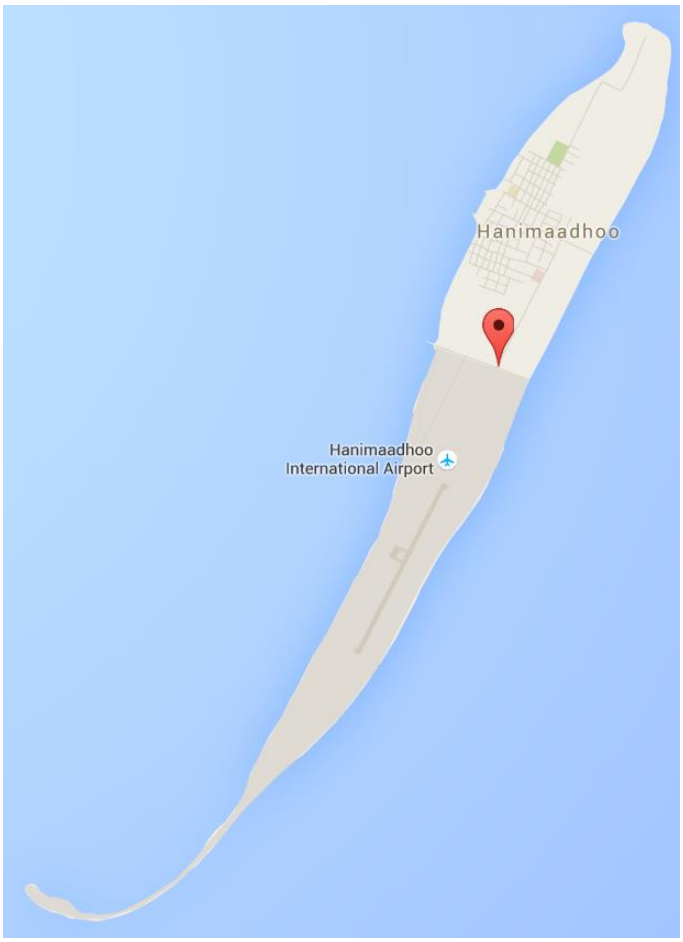
[5] At an estimated average electricity purchase price of $0.30 per kWh

MORE ON: THE MALDIVES AND HANIMAADHOO ISLAND

Maldives is a country comprising of 1,192 dispersed tropical islands grouped into 26 geographical atolls spread over an area of more than 90,000km^2 and occupying a total land area of 298km^2. Out of 1,192 islands, 190 are inhabited, 105 are self-contained tourist resorts and 21 are used for other commercial activities. The total population of Maldives is estimated to be 330,652[6]. The Maldives is entirely dependent on imported fossil fuel to meet its energy demands. Electricity generation is the single largest consumer of imported fuel. Out of 337,531 tonnes of diesel imported in 2012, 39% was used to generate electricity for inhabited islands[7].

The Maldives achieved universal access to electricity in 2008. Today, the inhabited islands of the Maldives have a total installed capacity of 141MW of diesel generators to cater for electricity demand. The dispersed nature of the islands and the fact that there is no existing national grid, requires that each of the islands has individually operated powerhouses. Thus there is a total of 191 powerhouses on inhabited islands.[8]

Hanimaadhoo is one of the inhabited islands of Haa Dhaalu Atoll administrative division and geographically part of Thiladhummathi Atoll in the north of the Maldives. It is home to one of four International airports in the Maldives and has been earmarked by the Government as a growth centre in the region. According to the local council's recent figures, Hanimaadhoo is home to 2,500 registered inhabitants and approximately 500 dwellings. Population on the island is expected to grow under the Maldivian Government's Population Development and Consolidation Programme (PDCP). The Island has no reticulated water supply and electricity is supplied by the state owned utility, Fenaka Corporation Limited (**Fenaka**). Fenaka generates all of the island's electricity from four diesel powered generators with peak capacity of 1,400kW and an estimated baseload supply of 600kW or 14,400 kWh per day (5,256 Megawatt hours p.a.).



The largest consumers of electricity on the Island are the international airport, the Maldives Climate Observatory and the Barefoot Eco Hotel. The Barefoot Eco Hotel draws power from the Fenaka diesel gensets when the Hotel's solar PV farm is not producing.

[6] http://www.statisticsmaldives.gov.mv/BrowseTheme.aspx?theme=Population
[7] 20131222-Pub-Maldives-Energy-Outlook-for-Inhabited-Islands-2013.pdf
[8] 20131222-Pub-Maldives-Energy-Outlook-for-Inhabited-Islands-2013.pdf

Schedule 1 – Conditions Precedent to Settlement

Settlement is subject to and conditional upon the following material matters:

- CEM entering into an executive services agreement (**ESA**) with Mr. Mohamed Shujaau (**Executive**), with effect at Settlement. Details of the non-cash incentives offered to the Executive during the period prior to Settlement, so as to accelerate development of the project, are contained in Schedule 2 below.
- Stonehenge obtaining all Australian and Maldivian regulatory and shareholder approvals required to complete the acquisition including completing the acquisition of Protean Energy Australia Pty Ltd and being readmitted to trading on ASX as a wave energy converter company upon re-compliance with Chapters 1 and 2 of the ASX Listing Rules;
- Assignment of approvals for the Wave Farm Project (**Approvals**) held by the Executive to CEM;
- Stonehenge completing its "rights to operate", financial and legal due diligence on CEM; and
- Stonehenge completing a feasibility study and due diligence (legal and financial), on the Wave Farm Project.

Schedule 2 – Summary of Non-Cash Remuneration for the Executive of CEM

Performance Milestones[1]	**Performance Rights to be issued to the Executive at Settlement**
Confirmation of the assignment of the Approvals to CEM	250,000
Establishing a physical place of business for CEM on Hanimaadhoo with all fixed costs covered for the initial 12 month period commencing from Settlement.	500,000
Registration of CEM as a foreign investment company with authority to construct and operate the Wave Farm Project.	250,000
Securing for CEM, Hanimaadhoo customer Offtake Expressions of Interest (Offtake EOI) for power or desalinated water up to a maximum power requirement of 2,000kW. This Performance Milestone applies only to Hanimaadhoo Island.	2,000[9] per kilowatt of SHE accepted and agreed Offtake-EOI

[1] The Performance Rights will convert into ordinary shares on a one-for-one basis and will have a nil exercise price. The full terms and conditions of the Performance Rights will be included in the notice of meeting to be despatched to shareholders in due course.

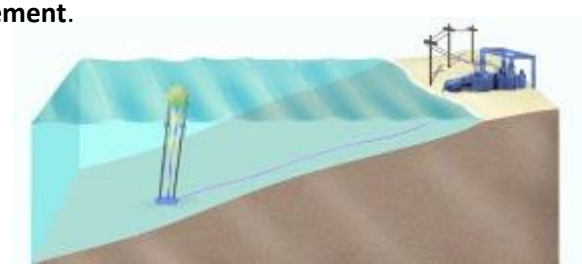
[9] To a maximum of 4 million Performance Rights. Non-binding EoI for potential customer demand of approximately 57kW average continuous power supply has been received at the date of this ASX Release.

MORE ON: THE PROTEAN™ WAVE ENERGY CONVERTER (WEC) TECHNOLOGY

Stonehenge has exercised its option to acquire the Protean™ WEC technology and completion of the acquisition is now subject to Stonehenge successfully re-complying with ASX Listing Rules.

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**.

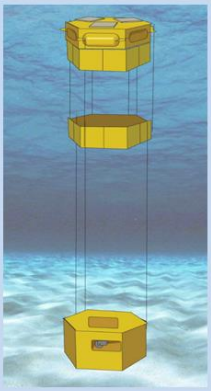
Figure:
Protean™ WEC technology



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 cost of energy down. The Protean™ WEC has been designed to be cost competitive to manufacture, deploy and maintain. The future plans for the Protean™ WEC include the deployment of a pre-commercial demonstration of a scalable power array (wave farm) prior to moving the technology into early commercialisation. The Stonehenge assessment program aims to:

1. **Refine** the 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 demonstration wave farm 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 (wave farm) for small to medium customers.

Protean™ Wave Energy Converter (WEC) Design, Construction and Deployment

PAST Successfully Tested Prototype	PRESENT AND FUTURE Deploy Demonstration Wave Farm
	
➢ 1.5m wide proof-of-concept device successfully tested. ➢ Device operation validated in varied depths and sea states. ➢ Design principles verified from test results. ➢ Simple patented deployment system demonstrated. ➢ 1m wide "proof of commercial applicability" unit with key design improvements successfully demonstrated.	➢ Identify and secure deployment sites and customers. ➢ Deploy 30 buoy demonstration Protean™ wave farm. ➢ Verify Protean as scalable power/water supply solution. ➢ Commence commercial pilot project. ➢ Target remote island, port and coastal industry users

For further information visit: www.proteanwaveenergy.com or www.stonehengemetals.com.au