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SPERBOY™

Embley Energy Ltd has developed a product named SPERBOY™ that is showing the potential to become a world leader in the generation of electricity from sea wave energy.

Wave power across the world's seas and oceans provides a huge, global, untapped resource of renewable energy that can be used to generate vast quantities of electricity at competitive rates without producing any carbon emissions what-so-ever.

The company owns or controls the intellectual property underpinning the design concept, and also possesses a wealth of know-how on the economics and practical engineering needed for commercial exploitation. Significant support is being provided by the UK Government's Carbon Trust, which has short-listed the SPERBOY™ WEC as one of the most promising marine energy concepts.

A 1/5th scale pilot unit that has been successfully deployed at sea and has proved the design concept of the product. Embley Energy Ltd (EEL) is now at the point where a period of significant investment is required to take the product through to full-scale prototype testing and into commercial deployment. Embley Energy recognises that additional resources will be required to deliver a commercially proven product and is seeking appropriate investors.

In addition to money, the company intends to invite investors with relevant specialist skills in: renewable energy; engineering and production processes. The total investment sought is £7 million, of which £4 million is expected to be 'in-kind' from the engineering and production partners. £3 - 4 million of cash is thus sought from 'private ventures'. This will enable two full size prototype WECs to be constructed and tested at sea.

The Company.

Embley Energy Limited ('EEL') was set up in 1998 and has, since 2002, instigated a wave energy research programme that will lead to commercialisation of the product. The device has undergone extensive research and mathematical modelling with 1/100th scale wave tank tests currently being undertaken. The early work was undertaken in conjunction with Plymouth University Department of Mechanical and Marine Engineering supported in part by a grant from the European Commission

EEL was later successful in becoming one of only eight companies sponsored under the **Carbon Trust's Marine Energy Challenge (MEC)** undertaken during 2005/06. This project was designed to ascertain the likely economic performance of the mature product in commercial operation. The results have proved sufficiently positive for the Carbon Trust along with the ***npower juice fund*** to grant further financial assistance to continue research into the economical design of the device still further.

EEL is a privately held stock company, with 22 shareholders. It owns or controls the commercial rights and patents to the product. However it currently lacks the resources to take the product forward into full-scale development and is currently considering options for it's future growth. This will be done in a series of steps culminating in two full-scale pre-production units. It is expected this process will cost some £6 million. EEL is thus seeking a mixture of business and financial partners.

EEL plans to take the product to commercialisation, and then negotiate Licence Fees covering the areas of Manufacture, Installation, Generation and Maintenance. The company does not anticipate becoming a direct manufacturer, nor a project developer.

The Product.

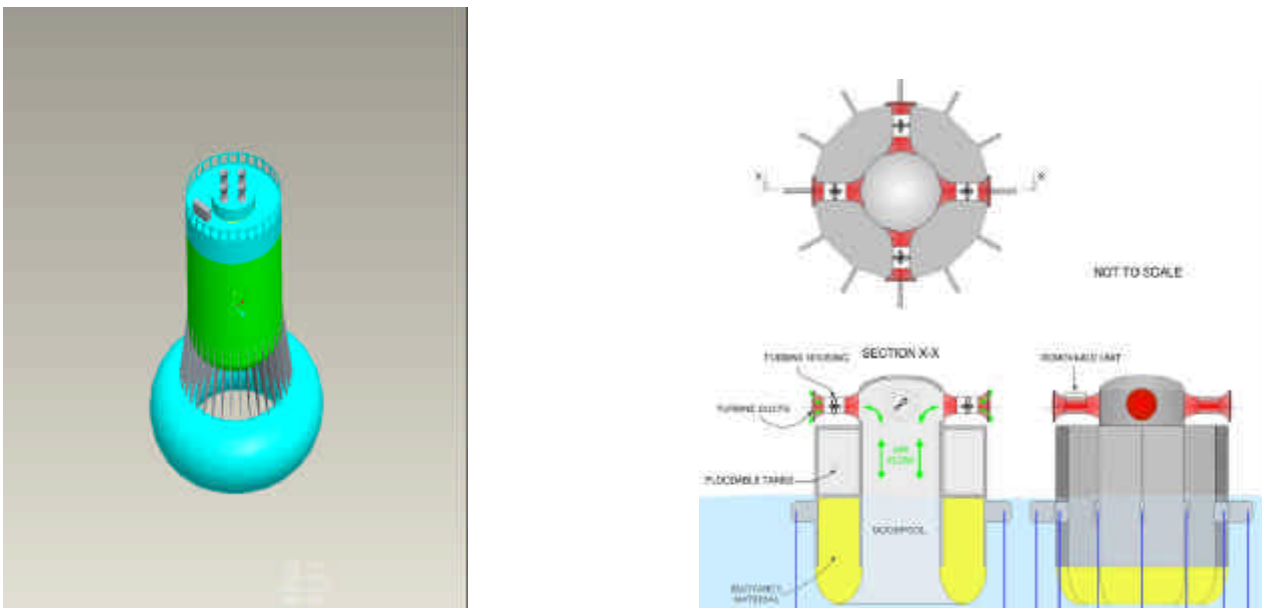
SPERBOY™ takes energy from the wave motion of the seas. It thus taps into a truly renewable source of energy, with all the accruing economic and environmental benefits. Most wave energy is to be found in active seas where SPERBOY™ is designed to operate, using this energy to compress air by a simple natural process, which is then passed through an air turbine driving a generator to produce electrical energy. It is a floating structure that uses the Oscillating Water Column principle (OWC) to capture energy from the waves in a very productive and unique way. OWC devices have been under research by a number of companies, and have been widely accepted as a credible design philosophy for sea wave energy capture deployed on shoreline installations for some years, and are widely used on navigational buoys.

It's unique features should make it a leader within the OWC family due to simplicity, ease of construction and maintenance, long operating life, low capital cost and low overall cost of generation. When deployed in seas along the Atlantic seaboard of Europe each unit is expected to have a rated capacity of about 1MW. Wave power is well suited to Western Europe, along with Canada, United States of America, Japan, South Africa, Australia and New Zealand. The energy market is believed to be some 50 TWh of wave power based upon current consumption.

The Economics.

The likely band of generation costs from SPERBOY™ is £50 to £140 per MWh based upon current research knowledge. The current market price of Renewable Energy in the UK would appear to be between £70 and £100 per MWh. The value placed on marine energy in Portugal is €240 per MWh, somewhat higher than the UK market. Clearly, EEL's product is likely to be highly competitive. The Carbon Trust's Marine Energy Challenge concluded that the devices assessed had costs of generation ranging from £50 to £400 per MWh. The simplicity of the SPERBOY™ WEC, along with a highly competitive cost of generation, places it at the forefront of WEC technologies. The Carbon Trust suggests there is likely to be £500 billion capital expenditure globally on WECs. Taking say 20% of this, being realistic over a twenty-year period, gives an estimated £5 billion per annum market. To put this in context, the current wind power market is larger and has been for some years. It is thus reasonable, indeed conservative, to assume that the wave power market will be at least some £5 billion per year.

A 5% royalty/licence fee on 75% of this yields approaching £200 million annually, solely for a manufacturing licence. Given SPERBOY™'s apparent economic attractiveness, a 10% to 30% market share might be a reasonable aspiration, providing annual manufacturing licence fees of £20 to £60 million. Generation and other licences are also expected to provide further revenues.



The dimensions of SPERBOY™ vary depending on sea conditions at the deployment site. Maximum envisaged - Diameter: 30 M. Overall Height: 50M. Draft: 35M. Weight: 3,500 tonnes.

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