BIOPOWER SYSTEMS AWARDED $5 MILLION FROM VICTORIAN GOVERNMENT

Sydney, Australia; 1 December 2011: Ocean energy company, BioPower Systems (BPS), today announced that the Victorian Minister for Energy and Resources, the Hon. Michael O'Brien MP, has awarded the company conditional funding support of $5 million under the Sustainable Energy Pilot Demonstration Program.

The funding will be applied towards the $14 million pilot demonstration of the company's 250kW bioWAVE ocean wave energy system at a grid-connected site near Port Fairy, Victoria.

"In developing the bioWAVE technology we set out to address the many issues that have bedeviled most wave energy technologies," said CEO, Dr Timothy Finnigan. Inspired by the motion of large sea plants under wave action, and conscious of the costs and difficulties of doing development work in the ocean, BPS took the unusual step of spending five years performing multiple on land tests at increasing scale prior to ocean deployment. The most critical component has been tested at full scale at its factory in Mascot NSW (Sydney).

"We are now ready for the ultimate test – installing the bioWAVE in high energy 30-metre deep ocean waters. We have to raise another $3.6 million to complete the project funding, and given our results to date we are confident of achieving this in the coming months. The technology has been positively assessed by more than a dozen independent reviewers," said Dr Finnigan.

The unique bioWAVE differs from other wave technologies in three critical ways.

Firstly, it is designed to generate grid compatible electricity 'in situ' and hence is connected to the shore via a sub sea electrical cable only. This gives good flexibility on locating the plant, opening up access to greater energy resources, while always transmitting the energy to shore efficiently as high voltage electricity.

Secondly, during extreme wave conditions it will automatically assume a "safe" position lying flat against the seabed. This reduces the structural design requirements (and hence cost) while maintaining reliability.

Thirdly, the design, utilising a patented wide "multi-blade" structure, is expected to capture a much higher proportion of the available energy than other designs.

"We believe bioWAVE will, when fully commercially developed, produce electricity at a price highly competitive with wind and be closer to baseload characteristics than either wind or solar", said Dr Finnigan. "It is gratifying that the potential of the technology has been recognised by the Victorian Government," he added.

Twelve other organisations have signed on to contribute cash and in-kind support for the planned four-year pilot demonstration project, including key suppliers, manufacturers, consultants and three Australian universities.

Further Background

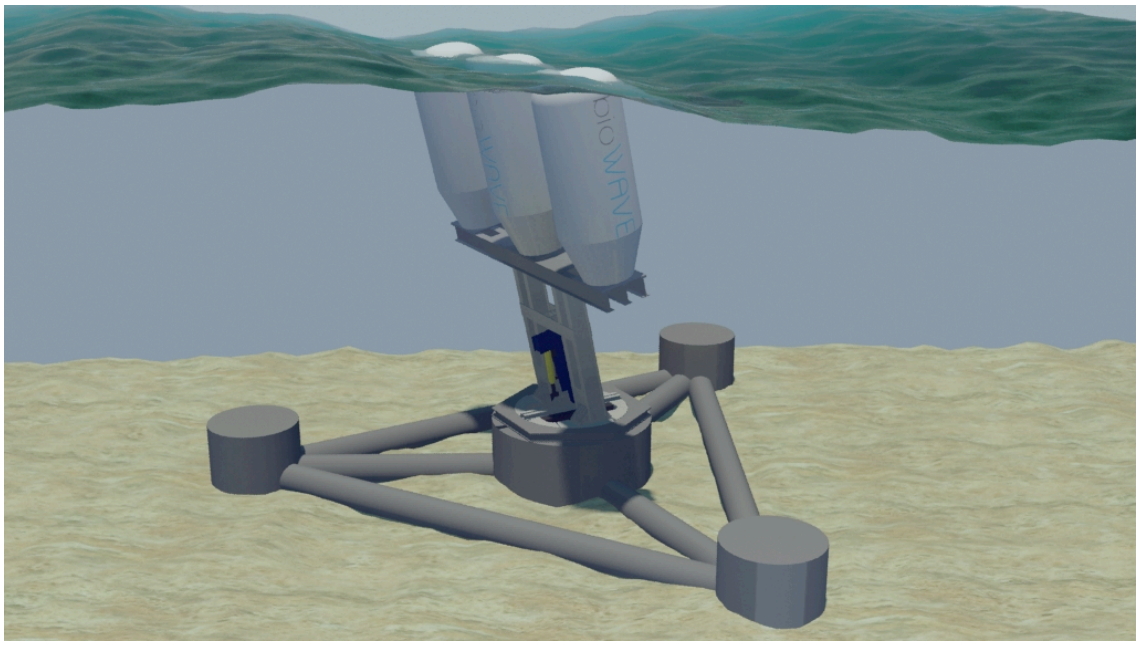
The bioWAVE consists of a structure that sways back and forth beneath the waves, integrated with a self-contained module (O-Drive) that converts the resulting oscillating forces to electricity by pressurising hydraulic fluid, which is used to spin a generator to produce electricity for delivery to the grid via a subsea cable. The technology is designed to operate in depths of 30 to 50 metres. The critical O-Drive module has been fully tested at its commercial scale of 250kW (Note, a 1MW commercial-scale bioWAVE would utilise a set of four 250kW O-Drive modules, arranged in parallel). The O-Drive is designed to be detached and easily retrieved for onshore servicing. The energetic wave climate of the Southern Ocean is ideal for performance testing of

the 250kW pilot-scale bioWAVE, which will be independently assessed and validated for potential commercial development.

Up to 23 new jobs will be created in Victoria during the project. Following the pilot, there is significant opportunity for expansion in Victoria using commercial-scale 1MW bioWAVE systems, with the potential for 200 new jobs in the first five years.

About BioPower Systems

Ocean energy company, BioPower Systems, is commercialising wave and tidal energy products that incorporate revolutionary designs based on the concept of biomimicry. BioPower Systems is designing its ocean energy products to naturally avoid extreme forces, using light-weight construction, resulting in significant cost savings. The proprietary bioWAVE and bioSTREAM products are intended for use in multi-unit farm installations for delivery of utility-scale clean renewable power to onshore distribution grids.
www.biopowersystems.com



bioWAVE™ ocean wave energy system

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Media Contact

Sabine Prill
BioPower Systems Pty Ltd
T: +61 (0)2 9146 4420
E: sprill@biopowersystems.com
W: www.biopowersystems.com

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