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The Committee Secretary House of Representatives Standing Committee On Industry and Resources PO Box 6021 Parliament House Canberra ACT 2600

Dear Sir or Madam

## INQUIRY INTO DEVELOPING AUSTRALIA'S NON-FOSSIL FUEL ENERGY INDUSTRY

I write to request that you include Oceanlinx's view in the development of Australia's nonfossil fuel energy industry.

Submission No:

Oceanlinx is an Australia-based renewable energy company with a unique, commercially efficient system for extracting energy from ocean waves and converting it to electricity, or utilising that energy to produce clean, fresh water from brine.

Wave power is a more reliable form of energy than either solar or wind power, with up to 80% consistency.

Oceanlinx's core patented technology is an Oscillating Water Column (OWC) device, based on the established science of wave energy, but one which – when compared to other OWC technologies – offers major improvements in the design of the system, the turbine, and in construction technique.

Oceanlinx is currently operating a 500 kW pilot plant in Port Kembla, NSW, which has attracted worldwide attention due to its position as currently the most competitive wave energy technology and as potentially the most economic renewable energy technology which may match or exceed the performance of wind energy, which is among today's most widely used forms of renewable energy.

Email: info@oceanlinx.com Web: www.oceanlinx.com Oceanlinx's Port Kembla facility has also demonstrated its ability to desalinate seawater to produce freshwater to supply much needed water to Australia's regions of water shortage.

## **Environmental benefits**

- Oceanlinx wave power plants reduce the need for fossil fuels, resulting in large reductions in greenhouse gas emissions. Each Oceanlinx unit will save thousands of tonnes of CO<sub>2</sub> and SO<sub>2</sub> emissions annually.
- The expected global market for wave energy could see a saving of more than one billion tonnes of CO<sub>2</sub> from the atmosphere each year on a like-for-like comparison with coal-generated power.
- The current prototype unit off the coast of Port Kembla produces zero  $CO_2$  and  $SO_2$  pollution, with noise emissions of less than 75 dB a negligible impact in the general noise-rich nearshore environment.
- Unlike onshore renewable energy facilities, which have met with significant community objections due to their high visual impact, wave power plants in offshore locations have low visual impact from shore.

## **Current projects**

Oceanlinx currently has several active or planned commercialisation and development projects in several countries including Australia, New Zealand, the Americas and Africa. Some of them are:

- Portland, Victoria Oceanlinx is currently in late-stage negotiations with a major Australian energy company for ten units to be located off the coast of Portland, with a peak capacity of 15 MW. This project, **at a cost of \$40 million**, has the potential to supply the power needs of about 15,000 homes in the local area and will be the largest ever firm contract for a wave energy power company. **At an energy production cost** which is competitive with wind energy, this project will demonstrate clearly Australia's leading position in wave energy technology and commercial development, further cementing Australia's strong worldwide position in renewable energy development.
- Rhode Island, USA the State Government is committed to funding a pilot plant, to be expanded to at least 10MW.
- South Africa contract for ten units over the next three years.
- Mexico CFE (the world's largest electric utility) is funding a major feasibility study for two new wave plants utilising Oceanlinx technology.
- UK advanced negotiations for a 5 MW plant.
- King Island, Tasmania feasibility study funding committed from community and local government; in power purchase discussions with the state power utility.
- Hawaii, USA negotiations about to commence for a project on Maui.

Even at this early stage of technology development, wave power at a modest scale (for example, that of the above-mentioned Portland project) can produce power at a similar cost to the well established wind power systems. As the technology develops further and production volumes increase, wave power may replace wind power as the most economic large scale renewable energy source.

Indicative estimates have shown that Oceanlinx's desalination technology can produce freshwater at a cost well under \$1/kL, which compares very favourably with Perth's recently announced second desalination plant, which has a cost of \$1.90/kL.

Australia has a long coastline on which most of its population lives. Several stretches of this coastline have been identified as having a strong wave climate which is favourable to wave power generation. Coupled with this, there are several unreticulated populated areas with severe freshwater shortage along Australia's southern coast, as identified by the National Action Plan (NAP) for Salinity and Water Quality. Many of these areas are not served by the existing national electricity supply and water supply infrastructure. They would be very well served by economic small scale wave power systems in place of diesel generation, which is increasingly costly and impedes Australia's greenhouse gas reduction efforts.

Oceanlinx's overseas commercialisation projects also have the potential of improving Australia's penetration of the world renewable energy market, one of the largest global business growth areas in the coming years. It has been estimated that wave power has the potential of supplying 10% of the global power needs. (Source: The Australian, 9 September 2007)

## Continued and consistent Australian Government support is vital

The Australian renewable energy industry has grown significantly in recent years as a result of the Australian Government and State Governments' support of renewable energy. This support has taken the forms of research and development grants, demonstration grants, the Mandatory Renewable Energy Target scheme, and others. The Australian Government's continued and increased support for technology and commercialisation endeavours of companies such as Oceanlinx will further enhance Australia's standing in, and practical contribution to, the international community in its efforts to curb greenhouse gas emissions.

Increased and consistent Government support in the following areas is considered vital to the development and commercialisation of Australia's **wave power** technologies:

- Further streamlining of regulatory approval processes, including environmental impact assessment and nationally uniform grid connection requirements.
- Funding assistance for feasibility studies of Australian wave power projects and wave powered desalination projects for island and remote coastal regions with freshwater scarcity.
- Funding assistance for wave climate surveys of commercially promising Australian island and coastal locations.
- Funding assistance for grid integration studies and demonstration projects, especially for small or weak grids.
- Funding assistance for technology development and demonstration.

Please call me if you require further information on any of the above issues. We will be pleased to further support the Inquiry, either by a meeting, a call or by email.

Yours faithfully

John Bell ) Chief Financial Officer Oceanlinx Limited