



Australian  
Monday 19/10/2009  
Page: 26  
Section: Business News  
Region: Australia Circulation: 138,765  
Type: National  
Size: 135.60 sq.cms.  
Frequency: MTWTF

Index: 1.3  
Brief: CARNEGIE(P)



**GILES PARKINSON**  
GREENCHIP

## Ready to ride the next wave

AUSTRALIA'S first commercial-scale wave-energy plant — and the world's largest — is to be located at Garden Island, 50km south of Perth.

The first unit of Carnegie Wave Energy's 5MW plant will be installed next year, with construction of 25-30 units complete by 2011.

The technology, invented by Australians, comprises a series of underwater buoys that use wave energy to drive pump units tethered to the seabed. High-pressure water is then used to drive hydro-electric turbines for emissions-free energy. The \$50m project will be supported by a \$12.5m grant from the West Australian government, and Carnegie hopes it will be followed by a 50MW plant should its application for funding under the federal government's Renewable Energy Demonstration Program be successful.

Although capital costs for the initial project are high — about \$10m per MW — this is expected to come down to between \$6m and \$7m for the second project, and will fall further in subsequent projects.

“By project three, four or five it will be a cost-competitive technology,” Carnegie chief executive Michael Ottaviano says. “We reckon that we will be cheaper than wind.”

It will certainly be cheaper than diesel, which is why Carnegie has also been asked to conduct a feasibility study for a wave-energy facility to power a naval base near Exmouth, north of Perth.

The base is currently off-grid and powered by diesel. Ottaviano says such island locations should be a prime market for the technology, although he also insists it has the potential to provide energy on a large scale. Ottaviano says that, like geothermal and solar thermal, wave energy's up-front capital costs are likely to be higher than wind, but its reliability will make it a cheaper source overall.

Carnegie's second project is likely to be in South Australia or Victoria, because its funding deal with Investec requires it to be located near the national grid. Carnegie is one of several ocean-energy groups competing for funds under the REDP — expected to be announced soon — with the losing bidders expected to seek opportunities overseas.

Ottaviano says Garden Island was chosen over rival sites such as Albany because it was close to the pilot plant at Fremantle, and could sell energy into the local grid or to the neighbouring naval base.