



Australian firm wants to catch West Coast waves for energy project

by Grant Bradley
energy reporter

As anyone with an ear on the marine forecast knows, it's seldom flat on the West Coast.

The reliable surf, originating from weather systems deep in the Southern Ocean, has got an Australian company interested in our western coastline.

Perth-based Carnegie Corporation wants to harness the power of West Coast waves to produce energy using new technology.

The company has lawyers studying legislation covering New Zealand's coastal seabed and water columns above it to see if legal tenure can be gained and will present its ideas to a wave energy conference in Wellington on Thursday.

The company will also meet Government representatives.

The ASX-listed company's chief operating officer, Greg Allen, said testing of the technology was about to step up to another level after tests in relatively shallow water off Fremantle,

near Perth.

The experimental Ceto (Cylindrical Energy Transfer Oscillating) technology is different from other wave energy devices as it rests out of sight on the ocean floor. An array of submerged buoys is tethered to seabed pump units. Buoys move with the motion of the passing waves, driving the pumps which in turn pressurise seawater and deliver it ashore via a pipeline.

High-pressure seawater drives hydro turbines and can also be used to supply a reverse osmosis desalination plant.

"The main aim is to provide baseload energy," Allen said

Allen said on present modelling 50 megawatt wave energy plants could provide sufficient power for 80,000 households. Such a plant would cost around A\$300 million (\$365 million).

One of the attractions of New Zealand was the Government's commitment to renewable energy and the abundant wave energy resource.

Ideal locations were where water

was deep close to the coast, power transmission systems were nearby and there was no conflict with other marine users. Because the system was fully submerged there was no visual impact and greatly enhanced storm survivability.

Allen said optimal swell height was between 2m and 4m.

The bulk of the research was going into ensuring the system would function and survive in seas in excess of that.

Carnegie is now exploring sites in Western Australia for a deeper water trial and hopes to have a small commercial plant in operation by 2010 or 2011. This could be in South Australia or even New Zealand.

The company's exploration in New Zealand comes as Christchurch company Neptune Power looks to harness tide power, rather than wave power, in Cook Strait next year.

Neptune has received resource consent from the Greater Wellington Regional Council for a trial that can last up to 10 years.

POWER FROM THE SEA

