



World-first wave power microgrid to be trialled in WA

By Emily Piesse

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A WA energy company is about to trial the world's first renewable microgrid power station using wave energy as one of its sources.

Perth-based Carnegie Wave Energy will build the pilot project on Garden Island, using wave and solar energy to supply power to the Defence Department and a desalination plant.

Chief executive Michael Ottaviano said the technology could be used to provide power to regional townships near the coast, as well as island communities.

"This is a model for islands to move away from diesel-power generation into a combination of renewables," Mr Ottaviano said.

"It's also [a model for] regional towns in Western Australia, particularly those that are either off-grid and also running on diesel, or those that are on the so-called fringes of a grid, typically on the end of long transmission lines."

Mr Ottaviano said the technology could reduce WA's reliance on transmission lines that are expensive to maintain and upgrade.

"It can cost hundreds of millions of dollars to upgrade, so as a way to avoid that sort of large expense, embedding renewable microgrids on the end of those transmission lines will be the future of clean power in Western Australia," he said.

"The Garden Island microgrid project will do the equivalent amount of power for about 2,000 to 3,000 households, so it's already of commercial scale."

Western Power is partnering with Carnegie and will provide technical expertise on the project.

The microgrid, which will cost up to \$10 million to build, will produce about five megawatts of energy, a significant portion of the Defence Department's electricity use on Garden Island.

If the trial is successful, Mr Ottaviano said the microgrid model could be used in regional centres such as Albany and Geraldton.

"This potentially could be rolled out to thousands and millions of households across Western Australia and beyond that really across the globe," he said.

"The potential for these sorts of projects is enormous."

Carnegie will undertake a detailed design phase before construction begins next year.

The microgrid is due to be completed by the end of 2016.

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PHOTO: Carnegie Wave Energy has connected its energy farm to the electricity grid. (ABC News: Courtney Bembridge)

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