

Wave power vision for sound

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A new \$4.8 million wave energy project in King George Sound will explore the potential to power the local aquaculture industry with renewable energy and establish the southern hemisphere's first commercial wave energy demonstration site in Albany.

Albany's world-leading UWA Wave Energy Research Centre will spearhead the project, alongside Tasmanian-based Federal Government-funded Blue Economy Cooperative Research Centre and the Australian Ocean Energy Group.

The project will see a reduced scale energy convertor — dubbed a Moored Multi Modal Multibody or M4 — deployed in King George Sound for six months in 2022-23.

Fitted with sensors, the wave attenuator will gather insight into how it performs in different ocean conditions and its potential to directly power microgrids to sustain the Albany aquaculture

industry using renewable energy.

The 25m prototype will be built in WA with Great Southern fabricators and will use wind generated wave activity to feed electricity into microgrids.

If the trial is a success, it could accelerate the commercialisation of wave energy in WA with future devices reaching up to 150m depending on the length and location of the waves.

It could also make Albany the home of the first commercial ocean wave energy market demonstration site in the southern hemisphere, offering a marketplace to showcase wave energy technology from around the world.

On Friday, the WA Government pledged \$1.55m to the vision, more than two years after the collapse of its \$16 million common-user infrastructure renewable wave energy project with Carnegie Clean Energy.

Regional Development Minister Alannah MacTiernan said it was



Wiebke Ebelingth, Christophe Gaudin, Alannah MacTiernan and Irene Penesis. Picture: Laurie Benson

vital WA established itself in the fast-moving blue economy.

"The McGowan Government is absolutely committed to decarbonising our economy and making sure that WA is really in the vanguard of new renewable energy industries and we have always kept our faith in Albany and the Great Southern as a centre for wave energy," she said.

"What this device is going to be able to give us is a real clear under-

standing of just actually how much (energy) can be generated from a device like this and enable us to determine what the appropriate scale will need to be for a device that becomes commercial."

Blue Economy CRC research director, professor Irene Penesis, said the project would be a big step in extending the organisation's mission to decarbonise offshore marine industries across Australia.

"We are here to perform world-class industry-led collaborative research and training that paves the way forward for innovative, commercially viable and sustainable off-shore development . . . that will transform Australia's blue economy industry," she said.

"We are looking to help support the aquaculture industry to expand offshore. And we are going to really need to look for solutions to have a more cheaper form of energy and to replace the diesel they use currently in their

operations. So this is a really critical project and hydrogen is of course one of those pathways we are looking at."

UWA Wave Energy Research Centre director Christophe Gaudin said he was "extremely confident" in the project's potential.

Professor Gaudin said they planned to deploy the device from October 2022 to March 2023. It is not expected to impact the operations of commercial fishers.

"This project is about opportunity, the opportunities that are arising from the world-class resources we have in Albany, the support and engagement of the State Government and the Blue Economy CRC," he said.

"What this project really promises to do for Australia's ocean renewable energy industry is to openly map the whole process including permitting, supply chains, risks, operational costs — while these aspects tend to be sensitive in commercial projects."