

Malcolm Turnbull funds pumped hydro storage project



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by Mark Ludlow

The federal government has moved to back its commitment to broadening the nation's energy mix by finalising a \$450,000 grant to EnergyAustralia to develop a pumped hydro energy storage project in South Australia.

While critics have taken aim at the Turnbull government's push to fund coal projects from the Clean Energy Finance Corporation, the move to fund the proven technology of pumped hydro - which is already operating in three sites in Australia - was welcomed by the energy sector.

EnergyAustralia's proposed \$200 million 100 megawatts project, located in the Spencer Gulf in South Australia, would be Australia's first pumped hydro project using seawater.

It is the first funding to flow from the Australian Renewable Energy Agency since Prime Minister Malcolm Turnbull and Energy Minister Josh Frydenberg asked ARENA and the CEFC to prioritise large-scale battery and pumped hydro projects.

"Energy storage is critically important to respond to the challenges posed by intermittent generation," Mr Turnbull and Mr Frydenberg said in a statement.

"Pumped hydro storage is a mature and cost-effective storage technology that can help address the need for security and stability in the electricity grid."

EnergyAustralia managing director Catherine Tanna on Tuesday briefed the federal

government's energy committee of cabinet on the potential project which could be operational by the summer of 2020-2021. The \$450,000 will be used for a feasibility study.

Ms Tanna said pumped hydro - which pumps water to a higher height and then releases it to produce electricity - was a proven technology with the Spencer Gulf project providing six to eight hours of storage which was the equivalent to installing 60,000 home battery storage units, but at one-third of the cost.

"It has been done before but it would be the first seawater pumped hydro in Australia," Ms Tanna told The Australian Financial Review.

"There's no doubt that it can work - there's no technical issues - it's just making the economics work. We will work all that out in the feasibility study. But storage is very important as a solution. We are trying to find something to provide that stability and reliability when the wind doesn't blow and the sun doesn't shine."

Unlike other pumped hydro storage projects in the pipeline, the EnergyAustralia project won't use solar storage to pump the water, but Ms Tanna said they would use cheaper power from the grid during times of low demand.

Pumped hydro storage is seen as one of the range of cost-effective technologies that can help deliver security and stability in the electricity grid. It is one of the technologies

which is expected to feature in the review of energy security by Australia's chief scientist Alan Finkel.

Hydroelectricity has been around for more than 100 years but is a relative limited energy source in Australia, mostly due to limited geographic options. It is only in use in the Snowy Mountains and in Tasmania.

Pumped storage hydro - which requires water to be pumped from a lower reservoir into a higher reservoir and then dropped through a turbine to create electricity - is only in operation in three locations in Australia, two in NSW (the Tumut 3 1500 megawatt power station in the Snowy Hydro scheme and Origin Energy's 240 megawatts Shoalhaven project on the South Coast) and one in Queensland (CS Energy's 500 megawatts Wivenhoe power station).

But ARENA has already ear-marked pumped hydro as an alternative energy source, allocating \$4 million to Genex Power's \$300 million 250 megawatt Kidston project in North Queensland, which will use an abandoned gold mine as hydro stage project or a "giant battery".

The listed company will use a 50 megawatt solar farm to power the storage plant's water pumps. It will then connect to the existing Powerlink transmission lines in North Queensland and then be connected to the grid.

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<http://www.afr.com/news/politics/malcolm-turnbull-funds-pumped-hydro-storage-project-20170221-guhkjdxixzz4ZHvOfPtH>

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