



Media Release

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Cultana seawater pumped hydro plant looks promising

A coastal pumped hydro plant proposed for South Australia's Spencer Gulf could generate 225 megawatts of electricity with eight hours of storage using seawater, according to the findings of an initial feasibility study released by the Australian Renewable Energy Agency.

On behalf of the Australian Government, ARENA in February announced \$453,000 in funding to Energy Australia to conduct the initial feasibility study into its proposed seawater pumped hydro energy storage (PHES) facility in Cultana. The study, totalling \$1.1 million was led by a consortium of Energy Australia, Arup and the Melbourne Energy Institute. The knowledge sharing report was produced by Energy Australia for ARENA.

The study found that the project would be technically viable with an optimal capacity of 225MW with storage capacity of 1,770MWh with eight hours of storage - the equivalent of more than 126,000 home batteries. The study found the facility would cost \$477 million, and would be economically viable based on several revenue streams. Subject to further engineering design, economical modelling and planning approvals, the project could be operational by 2023.

If it were built, the Cultana facility would be the largest seawater pumped hydro facility in the world, and the first in Australia. A 30 MW plant was built in Okinawa in Japan in 1999, and operated for 17 years.

PHES involves pumping water uphill to a storage reservoir and releasing it through a turbine to provide additional energy into the electricity grid when it is needed.

ARENA CEO Ivor Frischknecht said pumped hydro had an important role to play in ensuring flexible capacity in Australia's energy system. Along with Cultana, ARENA is supporting Snowy Hydro 2.0 and PHES feasibility studies in Tasmania and Kidston.

"Pumped hydro is the most established and common form of grid-scale storage which can capture and harness electricity produced by solar and wind so it is available when needed," he said.

"We are exploring the potential for pumped hydro across Australia, and the findings of this study are promising for a seawater plant at Cultana," he said.

To view the knowledge sharing report, visit arena.gov.au/blog