

13 FEBRUARY 2023

One step closer towards Australia's first commercial scale concentrated solar power plant

On behalf of the Australian Government, the Australian Renewable Energy Agency (ARENA) has announced it has approved \$65 million in funding to Vast Solar to construct VS1, a first-of-a-kind 30 MW / 288 MWh concentrated solar power (CSP) plant in Port Augusta, South Australia.

ARENA's funding for VS1 is conditional upon the project reaching financial close, which is targeted to occur in late 2023. VS1 is expected to take two years to build with commercial operations commencing late 2025.

The \$203 million project seeks to demonstrate the technical and operational performance of Vast Solar's modular CSP technology at utility scale to unlock further investment in future projects and provide another pathway for Australian industry to decarbonise.

The project will aim to demonstrate how CSP can provide a reliable and scalable dispatchable renewable energy solution in the Australian market.

CSP uses mirrors to concentrate and capture heat from the sun in solar receivers, with high temperature heat transferred via sodium and stored in molten salt. The stored heat can then be used to heat water to create steam to power a turbine and produce electricity, or the heat can also be used directly to decarbonise some industrial processes.

One of the benefits of CSP is that the captured heat can be stored cost-effectively for long periods with little loss of energy. This means that CSP can be used to generate electricity or provide heat on demand, including overnight.

ARENA has supported the Vast Solar technology since 2012, including providing \$9.9 million in funding towards the [1.1 MW CSP Pilot Plant](#) in Jemalong, New South Wales.

The innovations in Vast Solar technology, including the modular design, the use of sodium as the heat transfer fluid and patented control systems, allow the generation of higher temperature heat and a greater reliability of performance than traditional CSP technologies. As such, the Vast Solar CSP technology can result in a pathway to enhanced operational performance and significant cost reduction potential at scale.

ARENA CEO Darren Miller said the expansion of Vast Solar's technology into a commercial scale project shows that CSP technology could play an important role in generating and storing renewable energy at scale.

"With the increasing need for dispatchable renewable generation and longer duration energy storage, CSP has potential to assist Australia's energy transition alongside pumped hydro and large scale batteries," Mr Miller said.

"Vast Solar's global recognition as a leader in CSP technology innovation, combined with its significant technical and commercial expertise, mean that it is well placed to deliver Australia's first large scale CSP plant which should deliver power at a cost competitive with other forms of renewable generation."

Craig Wood, CEO of Vast Solar said: "We are grateful for ARENA's long-term support. Their understanding of the potential of our CSP technology is a testament to the Australian Government's ambition to deliver cost-competitive dispatchable renewable energy to help uphold emissions reductions goals while supporting local jobs and industry."

The Australian Government and ARENA have also provided \$19.48 million in conditional funding through the [HyGATE initiative](#) with Germany for Vast Solar's Solar Methanol production plant which consists of a 10 MW electrolyser producing green hydrogen for solar methanol production. Electricity and heat generated by VS1 will be used to power the electrolyser.

For more information on the project, visit the [ARENA website](#).