

Hon Dan van Holst Pellekaan MP Minister for Energy and Mining

Tuesday 19 November 2019

World's biggest battery to get bigger

South Australian electricity consumers will have more secure and affordable power with the State's Big Battery set to grow in size by 50% to help reduce household power bills and provide security services that were lost with the closure of the Northern Power Station.

Renewable energy company Neoen is expanding the 100MW/129MWh Hornsdale Power Reserve in South Australia after being granted \$15 million from the Marshall Liberal Government's \$50 million Grid Scale Storage Fund.

"The Marshall Liberal Government is leading Australia's transition to a reliable and affordable renewable energy system," said Minister for Energy and Mining Dan van Holst Pellekaan.

"The expansion of the Big Battery is expected to lead to significant savings by allowing South Australia to use even more renewable energy to lower prices in a secure fashion."

The expansion will be a world-leading demonstration of how battery storage can provide inertia, protecting the security of the grid by keeping frequency consistent.

Providing inertia from large batteries is a demonstration of global significance and is in addition to the Big Battery's existing role as a "shock absorber" during disturbances.

Traditionally, inertia was provided through the spinning of turbines in large power stations such as Northern and Playford. Since their disorderly closure, South Australia has suffered from a weak power system to the detriment of consumers.

Minister van Holst Pellekaan said the Marshall Liberal Government's strong plan for Home Batteries and Grid Scale Storage is providing strength to the system and relief to consumers after many hard years.

"We want South Australians to have cheaper and cleaner power, and renewable energy must be paired with storage to provide electricity to households and businesses when they need it."

"This expansion will support our transition to net-100% renewables energy and show the world a better way to manage the transition to renewable energy.

"The expansion will enable a much faster and bigger response to system disturbances, so the Big Battery can help stabilise the grid and store even more power for peak demand.

The capacity increase is expected to be completed by mid-2020; strengthening its position as the largest utility scale battery in the world.

Louis de Sambucy, Managing Director Neoen Australia acknowledged the support of the Marshall Liberal Government's to bring the cutting edge technology to South Australia.

"The expansion of Hornsdale Power Reserve is demonstrating the critical and multiple roles that batteries will play in the grid of the future," said Mr de Sambucy.

"Neoen will continue to champion this movement to deliver cheaper, cleaner and more reliable energy for the years to come."

Australian Renewable Energy Agency (ARENA) has committed \$8 million in grant funding towards the expansion of the Hornsdale Power Reserve.

ARENA CEO Darren Miller said large scale batteries will play a key role in ensuring reliable supply and power system security, as Australia transitions to renewable energy.

"Along with providing essential services to the South Australian grid, this will help to inform changes to our rules and regulations to value these new services and help other batteries enter the market on a commercial basis," he said.

"We hope this project will not only demonstrate the versatility of batteries in providing a range of grid services but also help pave the way for market reform."

This is the first project to receive financing from the State Government's Grid Scale Storage Fund which is designed to accelerate the deployment of new storage projects in South Australia that can address the intermittency of the state's electricity supply.

Notes to media:

An infographic, media releases, images and video can be accessed at:

<https://www.dropbox.com/sh/19nz4243wroyeor/AAAJMDaRI92YhFwzBUvdmNOa?dl=0>

Explaining inertial response

- Inertial response is achieved by programming advanced power inverters so that they emulate the behaviour of synchronized spinning masses, such as turbines in conventional power plants.
- As renewable power continues to replace coal and gas generation, electricity grids are losing the conventional power plants whose rotating masses have traditionally helped smooth over grid disturbances, moderating fluctuations in frequency.
- The battery mimics the release of kinetic energy, traditionally achieved from the rotating motion of steam and gas-powered generators.
- By emulating the behaviour of this technology, the battery is able to arrest grid frequency deviations and stabilise the grid, providing a substitute to the inertia provided by synchronized spinning turbines.
- Whilst this has been demonstrated at small scale in jurisdictions such as Ireland, this is the largest global demonstration of this critical system service.