

Origin and Neoen plan \$1bn batteries for NSW power plants

EXCLUSIVE

By **PERRY WILLIAMS**, SENIOR BUSINESS WRITER

5:51AM JANUARY 12, 2021 •  595 COMMENTS

Two of the world's biggest batteries, worth a combined \$1bn, will be built at the sites of NSW coal plants in a move to ease strains in the power grid and provide back-up for renewable energy generation.

Origin Energy plans to develop a giant 700 megawatt battery at Eraring, Australia's largest coal-fired power station, while France's Neoen is preparing a 500MW battery stack dubbed the Great Western Battery Project at Wallerawang, home to the former [EnergyAustralia coal station](#), which has now been decommissioned.

The two batteries would rank as the largest storage devices in the world and over four times larger than the Tesla [world-beating battery](#) in South Australia, which is also operated by Neoen.

The rollout of the big batteries shows the willingness of investors to ensure enough supply is in place when coal plants retire over the next two decades. It also boosts the flexibility of running Eraring, which supplies a quarter of the state's energy needs, during peak demand until its scheduled retirement in 2032.

Origin's 700MW battery, which can send power into the grid for up to four hours, will be developed in three phases, with the initial capacity expected online by late 2022. An expression of interest for its supply and installation was issued to industry players on Monday. The battery is the largest under consideration in Australia and will require sign-off from Origin's board.

"The deployment of this battery at Eraring will support Origin's orderly transition away from coal-fired generation by 2032, while complementing the policy objectives of the NSW energy road map," said Greg Jarvis, Origin's executive general manager for energy supply and operations.

“We recognise we have an important role to play in positioning Origin’s electricity generation portfolio to support Australia’s rapid transition to renewables,” Mr Jarvis said. “A large-scale battery at Eraring will help us better support renewable energy and maintain reliable supply for customers, by having long-duration storage ready to dispatch into the grid at times when renewable sources are not available.”

Neoen, which in November teamed up again with Tesla for a [“humungous” 300MW battery installation](#) near Geelong in Victoria, will spend up to \$400m on the NSW facility, with a generation capacity of 500MW and up to 1000 megawatt hours.

The battery installation will be close to the former Wallerawang plant and connect to a substation that was used for the coal development, documents lodged with the NSW Department of Planning show.

Neoen has so far committed \$3bn of investment on 1600MW of renewable generation in Australia and plans to double spending to \$6bn by 2022, representing 3000MW of power supply.

“The large-scale battery system would reduce the possibility of load-shedding and blackout events in the state, especially considering the multiple existing coal-fired power plants that are planned to retire in the next decade,” Neoen said in its planning documents.

A breakdown at AGL Energy’s Liddell coal plant in December has increased the potential for power blackouts [during heatwaves this summer](#) and forced the nation’s biggest aluminium smelter to cut production.

The batteries back up a key plank of the NSW government’s [ambitious plan](#) to attract \$32bn in private investment over the next decade focused on 12 gigawatts of renewable generation and 2GW of long duration storage.

Big energy producers and users [had previously raised fears](#) over a plan by the NSW government to underwrite investment in renewable and storage generation.

It may also ease tensions between industry and the federal government after Scott Morrison gave [companies until April](#) to commit building 1000MW of new power capacity to ensure there was a like-for-like replacement for the Liddell coal plant which will close in the 2022-23 summer.

Coal, which currently provides 70 per cent of electricity, will contribute less than a third of supply by 2040 and could be forced out earlier than planned retirement dates as competition from renewables and carbon constraints render plants uneconomic, Australian Energy Market Operator forecasts show.

By 2035 nearly 90 per cent of power demand could be met by renewable generation during periods through the day. However, that will require up to 50GW of large-scale solar and wind to be added under the most aggressive plan to cut emissions, representing nearly all the current capacity of the market to be built in just two decades.

Up to 19GW of “firmed” dispatchable resources such as gas, pumped hydro and batteries will be required in the next two decades to back up renewables.

Big coal plants like Eraring have been forced [to dial down capacity](#) close to minimum levels more frequently due to low wholesale spot prices and the solar “duck curve” phenomenon, where renewables beat coal on price during the day.

Traditionally the country’s big coal generators run around the clock, reflecting both market demand for the fuel but also the difficulty in tweaking output from huge pieces of machinery that can take hours to properly synchronise with the grid.

But the relentless surge of cheap and plentiful renewables — solar, wind, hydro and battery storage — is sparking a shift among the big baseload coal producers that supply 70 per cent of the grid’s needs.

Whereas once Origin may have run the plant through the day and night, the ability of solar to cut wholesale prices in the day means Eraring may make a better return ramping its output up and down to meet peak demand.

PERRY WILLIAMS, SENIOR BUSINESS WRITER

Perry Williams joined The Australian in 2018. Previously he was Asia energy reporter for Bloomberg News and prior to that held senior roles at the Australian Financial Review including resources editor and dep... [Read more](#)