

publication op-ed

Title: Akaysha Energy appointed to develop Waratah Super Battery

Following a competitive procurement process, the Energy Corporation of NSW (EnergyCo) has formally appointed Akaysha Energy to develop the Waratah Super Battery at the former Munmorah Power Station site.

Following the announcement of the potential early closure of the Eraring coal-fired power station earlier this year, which could be as early as August 2025, the NSW Government identified the Waratah Super Battery project as the most suitable solution that could be delivered in time to ensure the security of supply to Sydney, Wollongong and Newcastle.

The NSW Government has moved quickly to progress the project. On 2 September it was identified as Critical State Significant Infrastructure and on 14 October the Minister for Energy issued a direction to Transgrid as Network Operator to carry out the Waratah Super Battery project as a Priority Transmission Infrastructure Project. This world leading project will mitigate wholesale electricity price spikes, reliability issues and broader economic impacts and therefore will place downward pressure on the wholesale electricity market price.

The Battery Energy Storage System (BESS) is one of four elements of the innovative Waratah Super Battery project that has been designed by EnergyCo in conjunction with Transgrid. Most of the time, the BESS will remain in standby mode as a 'virtual transmission line' acting as a "shock absorber,' ready to respond when the power system experiences a shock, such as a lightning strike or bushfire. When this happens, the control system operated by Transgrid will automatically trigger paired generators in regional NSW to temporarily reduce their output, allowing the BESS to discharge while keeping the power system stable. Minor upgrades to some existing transmission lines will maximise the effectiveness of the project.

EnergyCo has worked closely with Transgrid, AEMO and other key stakeholders to design the project which has been devised to meet the State's increasing reliability needs until further network developments, such as the Hunter Transmission Project (Northern Sydney Ring) can be delivered. When these projects come online, Akaysha Energy will be able to use the full BESS capacity for participation in the energy market, putting further downward pressure on wholesale electricity prices.

As the selected Service Provider, Akaysha Energy will be responsible for the construction of a BESS located at the former Munmorah coal-fired power station that is capable of providing a guaranteed continuous active power capacity of at least 700 MWs and a guaranteed useable energy storage capacity of at least 1400 MWh. This battery will be contracted to Transgrid as the Network Operator for the purposes of providing the SIPS Service while the new transmission lines are built.

The physical size of the of BESS is anticipated to be 850 MW / 1680 MWh which is understood to be the largest committed battery project in the southern hemisphere and most powerful battery in the world. The larger size will allow Akaysha Energy to trade the additional capacity in the electricity market to access additional revenue streams. Some capacity will also be released at off-peak times of the day for trading. These features will place further downward pressure on the cost to electricity users in NSW.

The project is currently moving through the NSW Department of Planning and Environment approvals process, with the Environmental Impact Statement expected to be posted on the Planning Portal in coming weeks. Pending approval, construction of the BESS is expected to commence by April 2023.

This project is the first of a number of projects that will be delivered under the Electricity Infrastructure Investment Act 2020, to improve the affordability, reliability, security and sustainability of electricity supply. EnergyCo will continue to work collaboratively with the industry to transform the NSW electricity system into the reliable, affordable, low emissions energy system we need in the 21st century.

James Hay is the Chief Executive of the Energy Corporation of NSW.