UPDATES

ENERGYCONNECT, AUSTRALIA

Grid stability in progress

In August 2021, ANDRITZ received an order related to the EnergyConnect project from SecureEnergy Joint Venture (SEJV). The order comprises the supply of four synchronous condenser units, including all required Electrical Power Systems (EPS) for two substations, Buronga and Dinawan, in New South Wales, Australia.

Vital to the country's transition to a future powered by renewable energy, the EnergyConnect project will be a new interconnector between New South Wales and South Australia along with an added connection to north-west Victoria. Two synchronous condenser plants will be installed on the new interconnector to provide system resilience services, such as inertia, short circuit contribution and reactive power compensation. These services are required to maintain grid stability and will enable the National Energy Network to connect additional large-scale renewable energy resources.

The engineering and manufacturing of the synchronous condensers was successfully executed by ANDRITZ Hydro Weiz, Austria, and the electrical elements, including control, protection, and excitation system by ANDRITZ Hydro Vienna, Austria.

A highlight and an important milestone was the suite of Factory Acceptance Tests (FAT) in the workshop in Weiz of the different components, especially of the final pre-assembled and tested stator.

With the arrival of the synchronous condensers at the Buronga substation in May 2023, installation and precommissioning is ongoing.

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TECHNICAL DETAILS

Buronga and Dinawan (330 kV substations)
Units: 4 × 120 MVA
Speed: 750 rpm (8-pole salient)
Overload: 200% of rated MVAr for 10s
Inertia time const.: 7 s (natural)
Transportation weights: ~110 tons stator halves, main transformer