Media Release

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****VISION AVAILABLE****

World-class substation completed on Australia's largest transmission project

Construction of one of the biggest and most sophisticated substations in the Southern Hemisphere has been completed, providing a major connection hub to bring more affordable and cleaner renewable energy to millions of consumers in three states.

Transgrid and its EnergyConnect construction partner Elecnor Australia have completed the mammoth construction effort, with a multitude of workers spending millions of worker hours over three years delivering the world-class Buronga substation in southwestern NSW.

The substation is 15ha in size – equivalent to 21 soccer fields – comprising 24,000m3 of concrete and sophisticated electrical equipment from around the world, including synchronous condensers, phase-shifting transformers, shunt reactors, step down transformers, power transformers and capacitor banks.

Transgrid Executive General Manager of Major Projects Gordon Taylor said: "EnergyConnect is critical to improving the reliability and security of the National Electricity Market as coal-fired power stations retire, with interconnections to boost energy sharing between NSW, South Australia and Victoria.

"The 900km interconnector will provide access to clean, affordable renewable energy to households and businesses in three states, putting downward pressure on energy bills and helping Australia meet its net zero targets.

"The Buronga substation is a true feat in design, engineering, construction and commissioning and is the first in the world to boast five phase-shifting transformers running in parallel, providing improved load sharing, increased grid stability, enhanced transmission capacity, and reduced congestion.

"All mechanical and electrical works have been completed at the substation without any major injuries – a testament to the safety-first culture and commitment of our teams.

"We reached the final milestone with the energisation of the last section of the Buronga substation, which will increase capacity from 150MW to 800MW following completion of the 540km eastern section of the project between Buronga and Wagga Wagga."

Elecnor Australia's EnergyConnect Project Director Felipe Delgado said: "We are proud to have delivered this sophisticated and world-class substation at Buronga, NSW, which will direct and balance power flows between three Australian states.

"The scale and engineering complexity of this substation is unlike anything else in Australia. Working alongside our delivery partners across civil, structural, mechanical and electrical disciplines, we overcame engineering challenges to integrate highly specialised equipment from around the world including phase-shifting transformers, synchronous condensers, capacitor banks and shunt reactors.

“This remarkable and iconic project demonstrates what can be achieved through shared technical expertise, collaboration and skill.”

For more information on EnergyConnect visit: https://www.transgrid.com.au/projects-innovation/energyconnect

Buronga substation fast facts

- 15ha in area (equivalent to 21 soccer fields)
- 24,000m3 concrete
- 1,800 concrete piles
- 420,000 metres of low-voltage cabling
- A 60m long 1200m^2 machine hall
- Five 200MVA phase-shifting transformers
- Four 330kV 60MVAr shunt reactors
- Two 120MVAr synchronous condensers
- Two 120MVA 330/12kV step down transformers
- Three 200MVA 330/220kV power transformers
- Two 330kV 52MVAr capacitor banks

Vision available here

Video: https://vimeo.com/1111854596/0a9139b30a?ts=0&share=copy
VNR: https://vimeo.com/1111852058/7f3dd37c5d?share=copy

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