

# Media Release

13 June 2023

## More than meets the eye to complex transformer convoy

A complex convoy across two states and through the outback has marked a major milestone for Australia's largest electricity project, EnergyConnect, with the arrival of the first Phase Shifting Transformer for the project.

The \$1.8 billion EnergyConnect project will allow energy to be shared between NSW, South Australia, and Victoria and enable the connection of more new renewable generation.

Transgrid and construction partner SecureEnergy are building the 700-kilometre NSW section of the project from Wagga Wagga to the South Australian border, and a connection to Red Cliffs in Victoria.

The 374 tonne Phase Shifting Transformer (PST) is a specialised transformer that controls the flow of active power on transmission networks and will be housed at Buronga substation near Mildura.

Transgrid Executive General Manager of Major Projects Gordon Taylor said: "EnergyConnect is a critical project which is helping us make Australia's transition to clean, reliable, renewable energy possible.

"This transformer will be a key part of the energy superhighway Transgrid is building that will benefit millions of Australians and we're excited to see it arrive, especially as it will be the first of this size installed in Australia.

"The delivery of the big-ticket equipment underscores the critical progress we're making and the size just of the equipment needed to transport it is another example of the sheer scale of the project," he said.

SecureEnergy Project Director, Samuel Basanta Lopez said it is the first 330kV PST to be installed in Australia.

"This is an important milestone for the project because it signals, we are getting on with the job of building this extraordinary project which has so many firsts," he said.

The PST is the first of five specially designed and built by Hyosung in South Korea.

Hyosung Project Manager Martin Glass said: "Hyosung has enjoyed working with Transgrid and SecureEnergy through the design and test phases, and we're very proud to provide the largest phase shifting transformers in Australia and to see them successfully delivered."

The giant transformer was disassembled in South Korea for the sea voyage to Adelaide where it was loaded onto a convoy of three prime movers, two to pull the load and one to push.

A 76.8 tonne Widening Platform Trailer with 128 wheels, imported from France, was needed to carry the transformer but due to road weight limits it had to travel almost 900 kilometres via Broken Hill to the destination Buronga.

"Due to the dimensions and weights of the PST Main tanks, a very lengthy and complex permitting process was undertaken, involving many stakeholders over two states in South Australia and NSW.

"The wide and heavy load required traffic to be stopped along the route to be able to use both sides of the road to navigate corners and while crossing narrow bridges," said Mr Basanta Lopez.

The logistics of the marathon road journey were managed by deugro Projects.

Project Manager for deugro William Troughton said: “Countless hours were spent planning, scheduling, and preparing to ensure that the first PST unit into Australia was delivered to the Buronga project site without a hitch.

“We look forward to continuing this work with SecureEnergy and Hyosung, as well as our strategic partners, for the delivery of the remaining PST units, and to the safe and successful completion of the project,” he said.

The convoy also included a camera operator and a drone pilot from Floodlight Content which specialises in capturing complex operation and large-scale projects.

“This was one of our longest road-trips, and we used drones and other cameras to follow the massive transformer the entire way from Port Adelaide to Buronga,” said Holly Howard, Floodlight Content Producer.

Once delivered to site an overhead lift system and a HT500 Skate system, the first of its kind in Australia, was needed to carefully manoeuvre the PST onto its concrete pad.

The next stage will be to align the interconnection chambers that connect the two transformer tanks together. Once that is done work will get underway to connect the PST to the rest of the substation.

The 16ha Buronga site is the main hub that will connect NSW, Victoria, and South Australia. It will be one of the biggest and most sophisticated substations in the southern hemisphere and includes the five phase-shifting transformers, two synchronous condensers and four shunt reactors.

The arrival of the PST follows a busy month on the site including two all-night pours of 1,700 cubic metres of concrete for the foundations for two synchronous condensers.

To find out more about EnergyConnect visit: <https://www.transgrid.com.au/projects-innovation/energyconnect>

### **Convoy at a glance**

- Transformer weight 374 tonnes (comprising of 2 separate units)
- 3 prime movers – 24.5 tonnes each
- 128-wheel trailer - 76.8 tonnes
- 900 kilometres covered
- Average speed 45-50 kph

**Media enquiries: Jonathon Hall 0428 413 708**