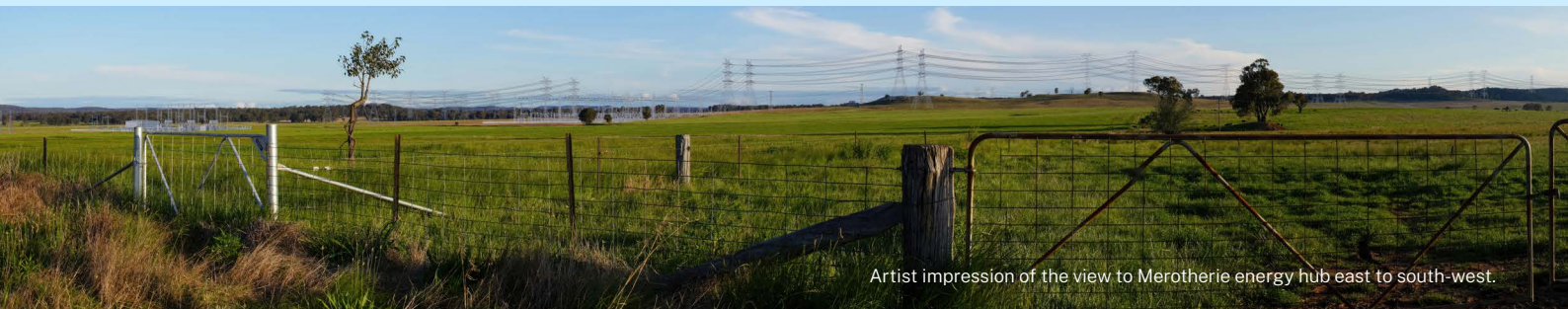


REZ transmission infrastructure

Central-West Orana REZ transmission project

September 2023

EnergyCo is delivering the Central-West Orana Renewable Energy Zone (REZ) to provide a clean, affordable and reliable power supply for energy consumers across NSW. The Central-West Orana REZ transmission project will involve the construction of new transmission lines, energy hubs, switching stations and related infrastructure. The new REZ network infrastructure will enable renewable energy from solar, wind and storage projects to be distributed to energy consumers across the State via the existing NSW transmission network.



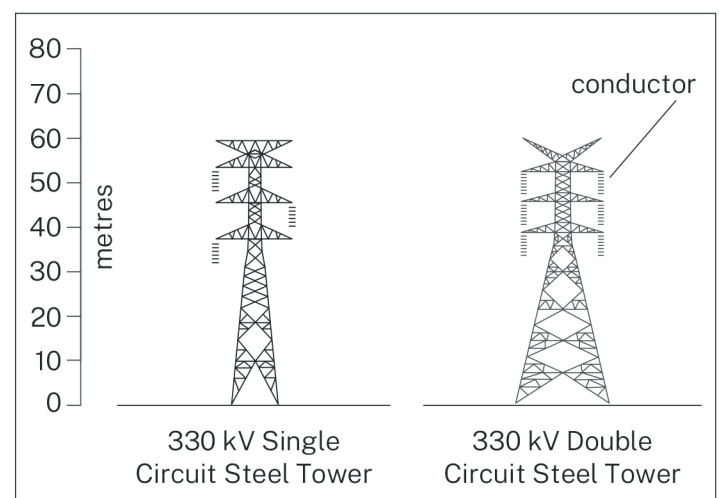
Artist impression of the view to Merotherie energy hub east to south-west.

Overview

The Central-West Orana REZ transmission project would include the construction and operation of new transmission lines, in addition to energy hubs and switching stations which will collect and transform power for transmission onto the existing NSW electricity network.

The transmission line infrastructure required for the project would include a series of twin and single circuit transmission lines which would operate at 500 kilovolts (kV) and 330 kV. A single circuit transmission line has three sets of conductors, while a double circuit transmission line is two independent circuits on the same structure with each circuit made up of three sets of conductors.

Single circuit and double circuit transmission lines

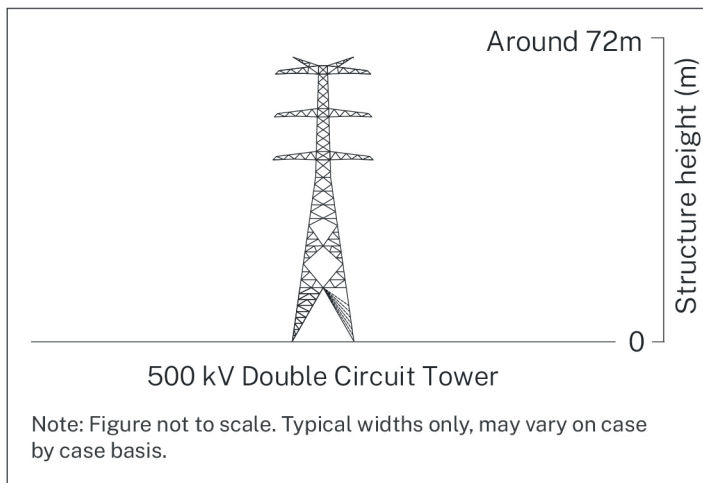


For more details on the network infrastructure for the Central-West Orana REZ transmission project, please view **Chapter 3 Project description** of the Environmental Impact Statement (EIS) via EnergyCo's website at energyco.nsw.gov.au/cwo.

500 kV network infrastructure

The 500 kV network infrastructure includes about 90 kilometres of twin double circuit 500 kV transmission lines which would form the backbone of the REZ transmission network. These lines would run from the new Wollar switching station to the Merotherie energy hub and on to the Elong Elong energy hub. The 500 kV network infrastructure would connect to the existing NSW transmission network (as part of the National Electricity Market) at Wollar via the New Wollar switching station.

Indicative concept design for the 500 kV transmission line towers



Energy hubs

Two energy hubs at Merotherie and Elong Elong would transform power collected from renewable energy generation projects within the REZ to 500 kV and transmit this via the transmission network to the grid.

Switching stations

The switching stations along the 330 kV network infrastructure would connect and combine the energy generated from the connecting renewable energy generation projects onto the 330 kV transmission line network.

For more information on energy hubs and switching stations, please view the fact sheet on our website at energyco.nsw.gov.au/cwo.

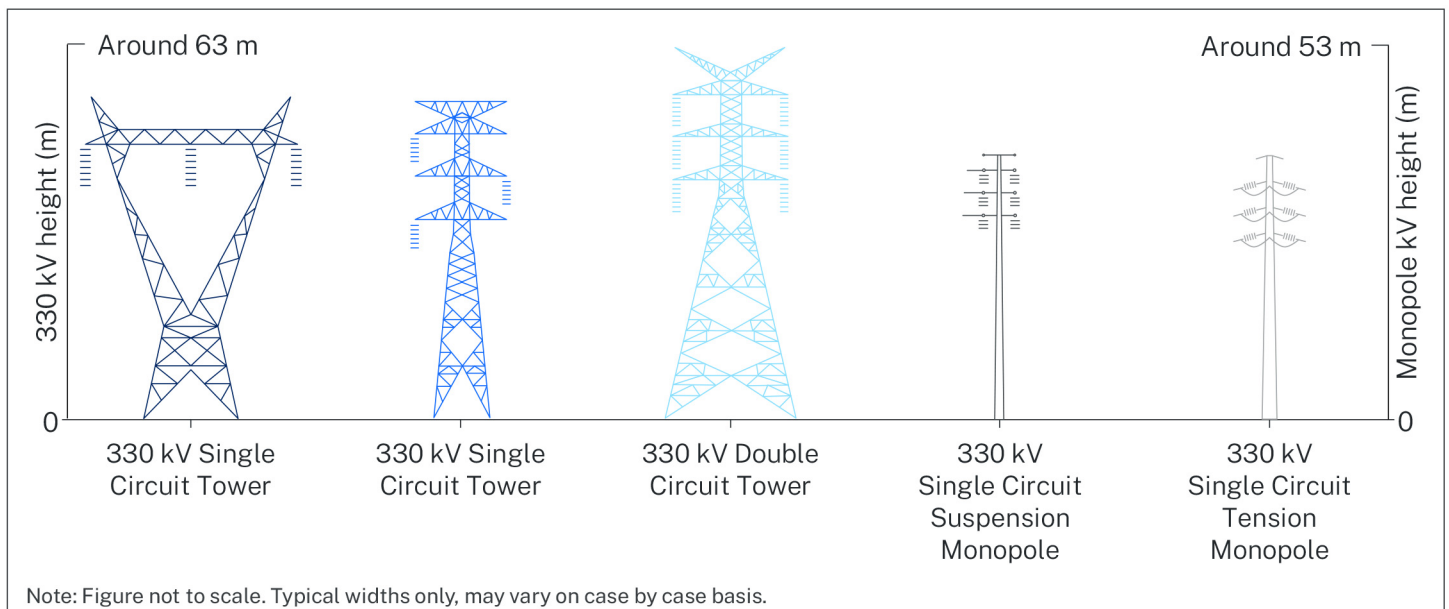


Artist impression of the view towards Elong Elong energy hub from Dapper Road.

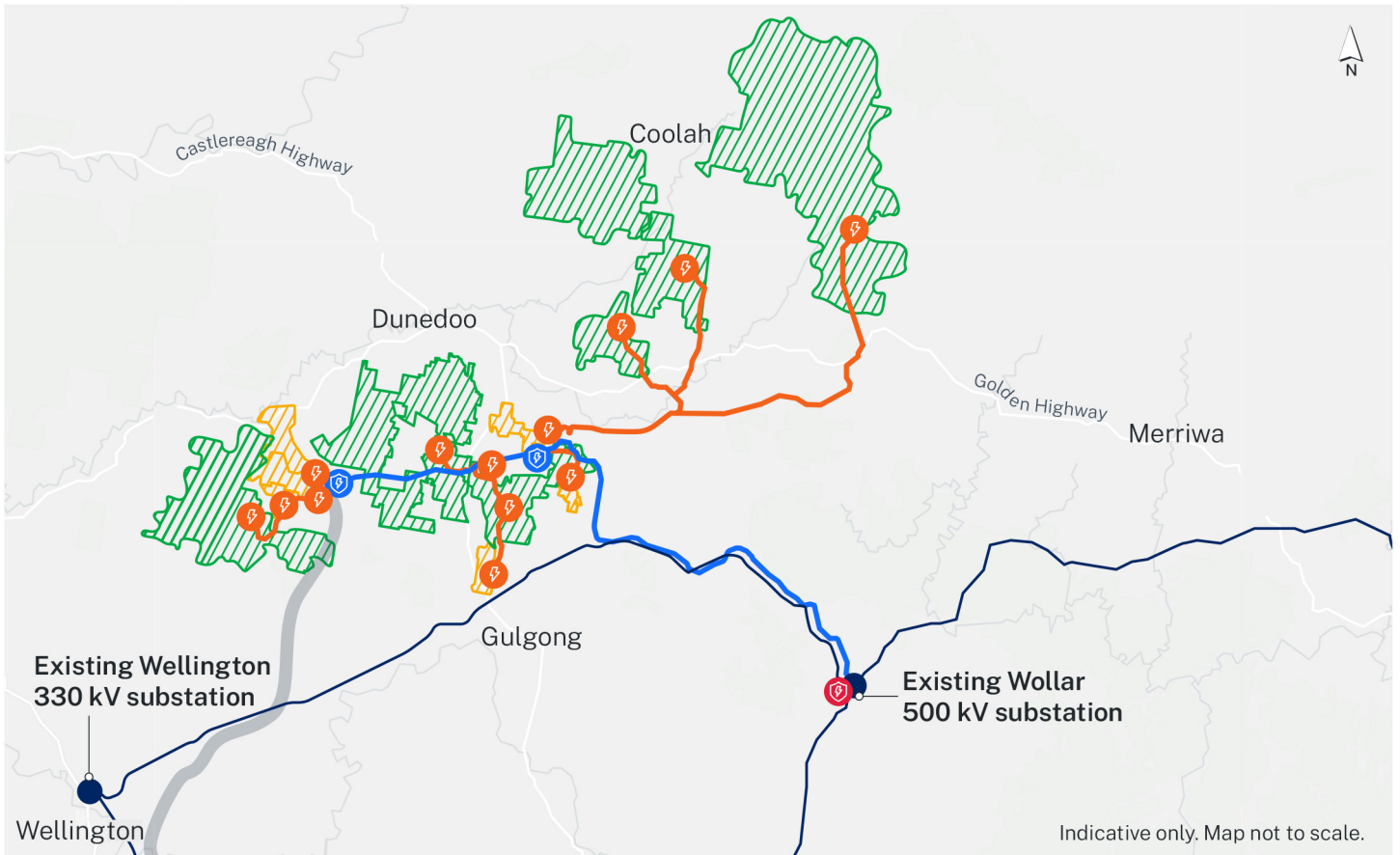
330 kV network infrastructure

The project would include around 150 kilometres of 330 kV network infrastructure. The 330 kV network infrastructure would provide a connection between the energy hubs (along the 500 kV network infrastructure at Elong Elong and Merotherie) and 13 switching stations.

Indicative concept design for the 330 kV transmission lines



Operational features of the project



Legend

330 kV transmission corridor	Generator connection point	Potential southern extension (Stage 2)*
500 kV transmission corridor	Existing substations	Existing NSW transmission network
Energy hub sites	Planned wind project*	
New Wollar switching station site	Planned solar project*	

* Subject to separate planning approvals.

Minimising impacts

EnergyCo has designed the transmission line alignment to avoid and/or minimise impacts on environmental, land use and social values wherever possible, including locating the alignment next to existing transmission easements, through areas of previously disturbed land, and within areas used for mining. In addition, EnergyCo has worked with generators to minimise the number of transmission line easements between the project and renewable energy generation projects wherever possible.

Maintenance

Access to the transmission line easements for operational maintenance would use existing public and private roads and access tracks where possible and be used by a range of heavy and light vehicles. Improvements to existing access tracks and new access tracks would be required to provide appropriate access to construction areas and some may be retained for operational maintenance.

Generator connections to the REZ transmission network

Connections to the 330 kV network infrastructure would be provided to renewable energy generation projects in the Central-West Orana REZ who are successful in their bids to access the transmission infrastructure through the Consumer Trustee's competitive tender process. The development of renewable energy generation projects in the Central-West Orana REZ does not form part of the REZ transmission project and individual generation projects are subject to separate planning and environmental approvals.

Renewable energy generators are responsible for connecting their projects to the closest switching station in accordance with their own planning approvals.

For more information on the planning approval process for generation projects intending to connect to the REZ transmission network, please view the renewable energy generation projects page on our website at energyco.nsw.gov.au.

About EnergyCo

The Energy Corporation of NSW (EnergyCo) is a statutory authority responsible for leading the delivery of Renewable Energy Zones (REZs) under the NSW Government's Electricity Infrastructure Roadmap. For more information, visit our website at energyco.nsw.gov.au/about-energyco.

Contact Us

For more information about the Central-West Orana REZ project, you can visit our website or contact the project team:

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📞 1800 032 101

🌐 energyco.nsw.gov.au

🗣️ If you need help understanding this information, please contact the Translating and Interpreting Service on **131 450** and ask them to call us on **1800 061 114**.

EnergyCo wants to hear what you think about our plans. If you have questions or want to give feedback, please get in touch with our team. You can find more information on our website by scanning the QR code or by visiting energyco.nsw.gov.au.

