

New England REZ Community Reference Group

Online session

Thursday 21 August 2025

EnergyCo

The Energy Corporation of NSW (EnergyCo)



Acknowledgment of Country



Energy Corporation of New South Wales acknowledges that it stands on Aboriginal land. We acknowledge the Traditional Custodians of the land and we show our respect for Elders past and present through thoughtful and collaborative approaches to our work, seeking to demonstrate our ongoing commitment to providing places in which Aboriginal people are included socially, culturally and economically.



New England Solar Farm

Welcome



Today we're taking a step back to explain how the New England Renewable Energy Zone (REZ) will work as a whole.

Purpose

- ✓ Build understanding of how generation, transmission and energy hubs fit together
- ✓ Explain the infrastructure being delivered as part of the project.
- ✓ Help you confidently explain this to your communities and contribute informed feedback during project discussions

Meetings



Proposed meeting dates for next CRG meetings

- North – Wednesday 24 September, 11.30am – 2pm, Uralla
- South – Wednesday 24 September, 5pm – 7.30pm, Tamworth

Future CRG agenda items

- The question register is to answer questions that may not need to come to CRG for discussion
- Some agenda items have been agreed at previous meetings, including landowner payments and community benefits
- A survey will be distributed to identify items of most interest to CRG members. This list will be based on items raised previously. Please email any additional items you would like considered for future CRG meetings (including matters raised through the Questions Register)


Introductions

North and South CRG members:

- Community members
- Community groups
- Local Aboriginal Land Councils
- Council representatives
- EnergyCo presenter: Joel Gruber, Technical Design Manager

Meeting process

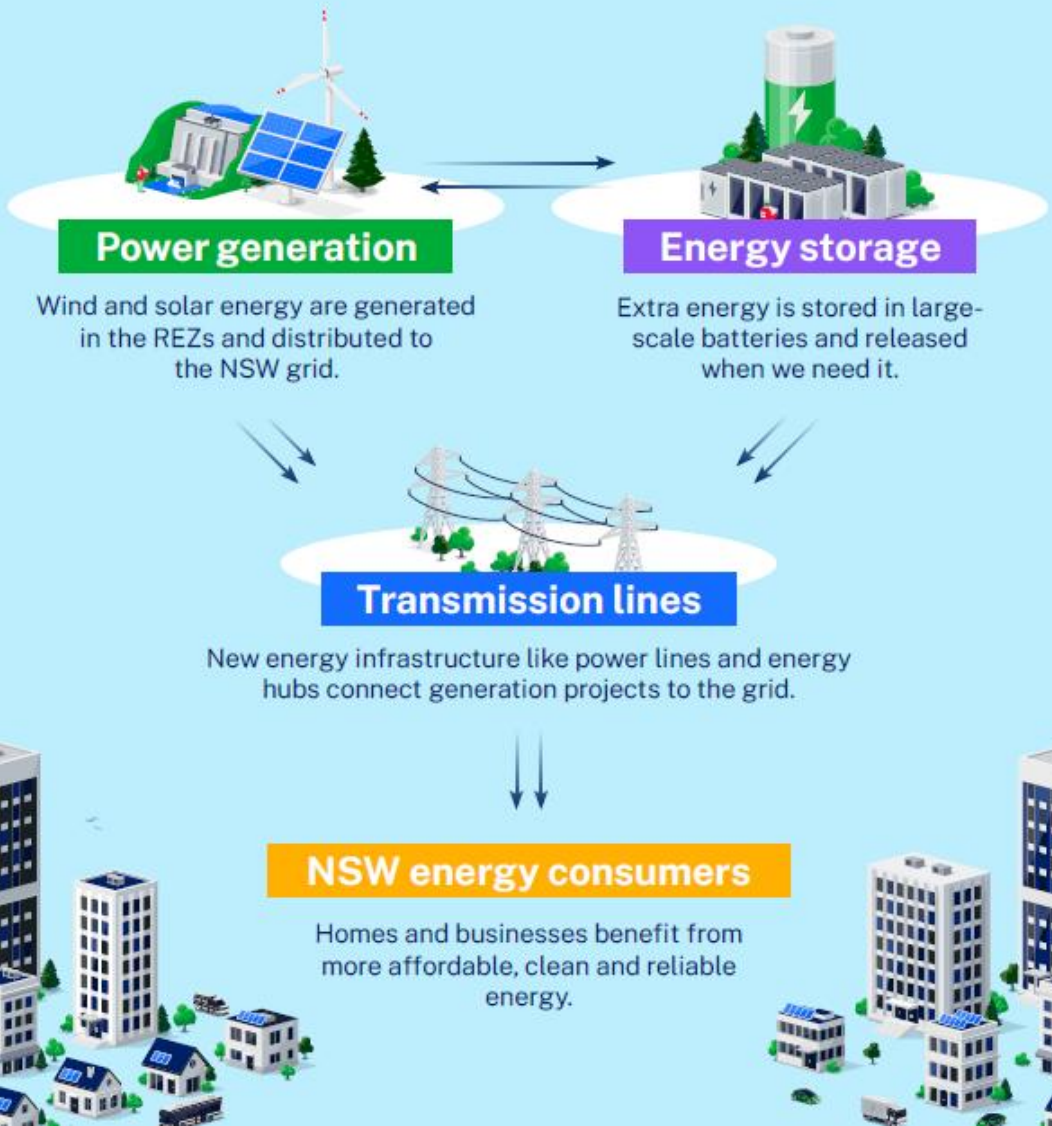
- ✓ Questions may be added to the chat during the presentation
- ✓ Question time to follow presentation – round the room
- ✓ Questions after the session may be sent via email



New England Solar Farm

How a REZ works

REZs group renewable generation such as wind and solar, storage like batteries and pumped hydro as well as high-voltage poles and wires, to deliver electricity to homes and businesses.



What is a REZ?

A Renewable Energy Zone (REZ) is like a hub for clean energy

It brings together:

- Wind, solar, battery and hydro generation.
- Infrastructure to transmit that energy.
- Connection points (called energy hubs) to the grid.

Why they're important:

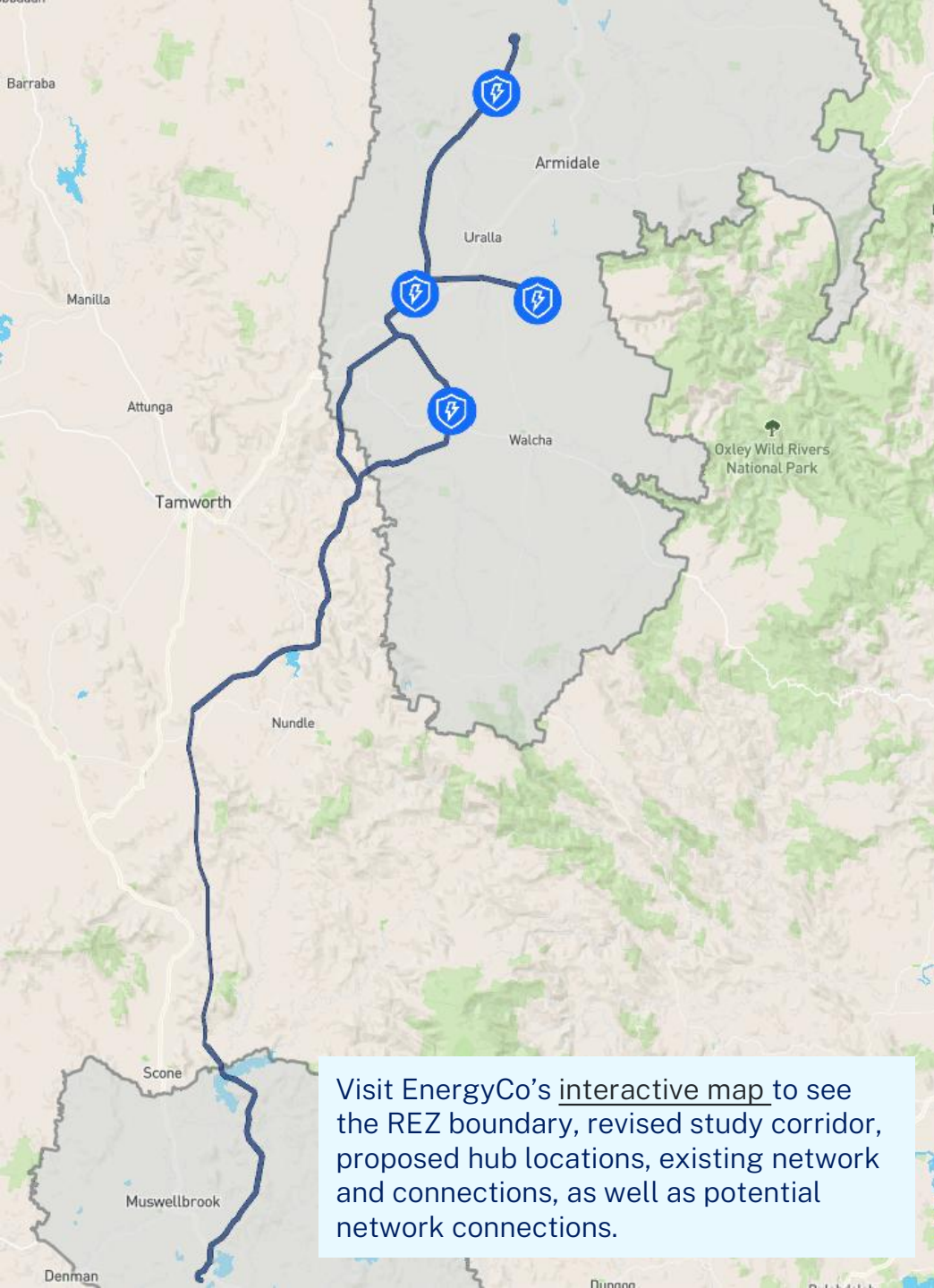
- ✓ Coordinates where renewable projects are built to reduce costs and impacts.
- ✓ Ensures the grid has enough capacity to take the new energy.
- ✓ Helps NSW transition from coal-fired power to renewable energy by 2033.

The New England REZ Network Infrastructure

The New England REZ network infrastructure project area stretches over about 250km from north to south.

The proposed infrastructure includes:

- dual 500kV lines between Bayswater up to the New England REZ
- new single 500 kV and 330 kV lines to connect to proposed energy hubs within the New England REZ
- about 1,300 transmission line towers over about 305km of transmission line corridor, typically spaced about 400m apart
- enabling and ancillary infrastructure including access roads, state road upgrades to enable the transport of over-size-over-mass (OSOM) project components and construction laydown areas.



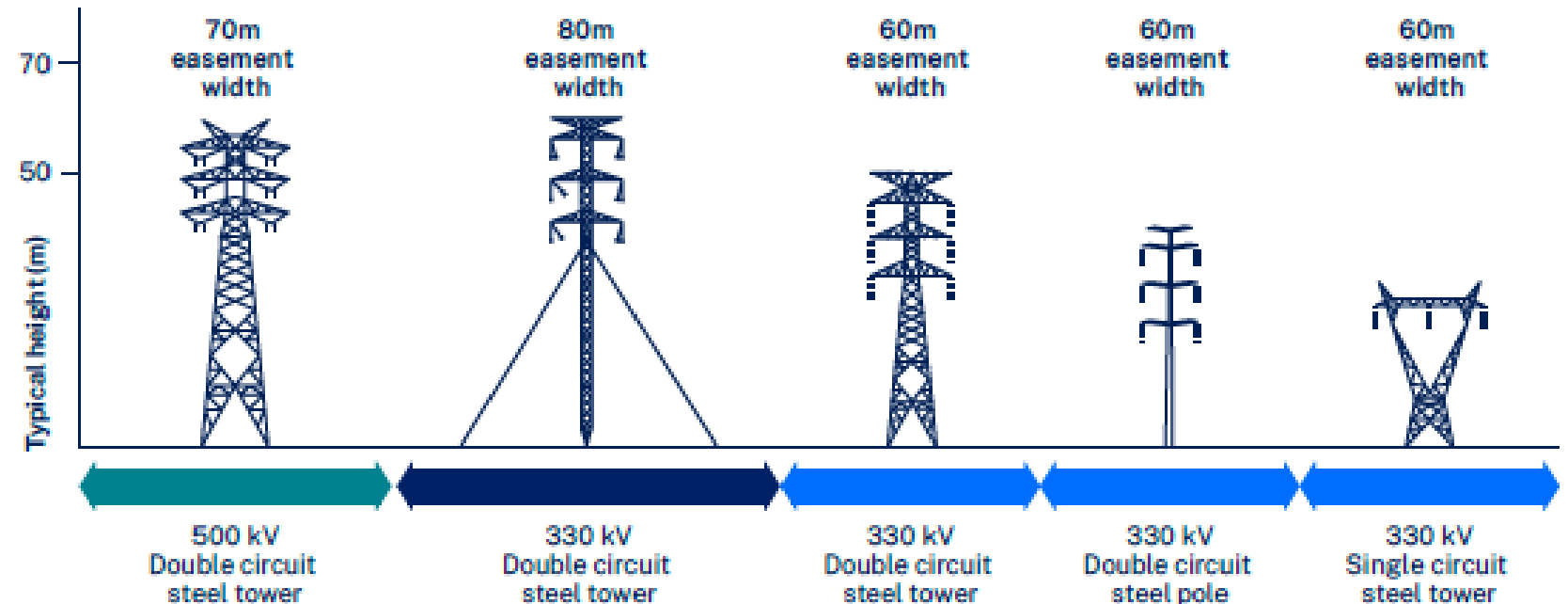
Visit EnergyCo's [interactive map](#) to see the REZ boundary, revised study corridor, proposed hub locations, existing network and connections, as well as potential network connections.

What infrastructure is being delivered?

Transmission lines

- Long-distance high-voltage power lines (up to 500 kV) to move electricity from the REZ to the existing grid
- Designed to carry large volumes of power efficiently
- Steel lattice structures to support the transmission lines
- Generally 50–70m high, spaced about 400m apart
- Designed to Australian safety and environmental standards.

Typical transmission tower designs¹





Transmission tower components

These components work together to safely and efficiently transport electricity across the New England REZ.

- **Conductors:** High voltage power-carrying cables, typically aluminium or aluminium-steel alloy
- **Ground and shield wires:** Protect the system from lightning and electrical surges
- **Insulators:** Prevent direct contact between wires and towers
- **Spacer/damping devices:** Reduce wire movement and prevent short circuits

What would transmission towers look like?



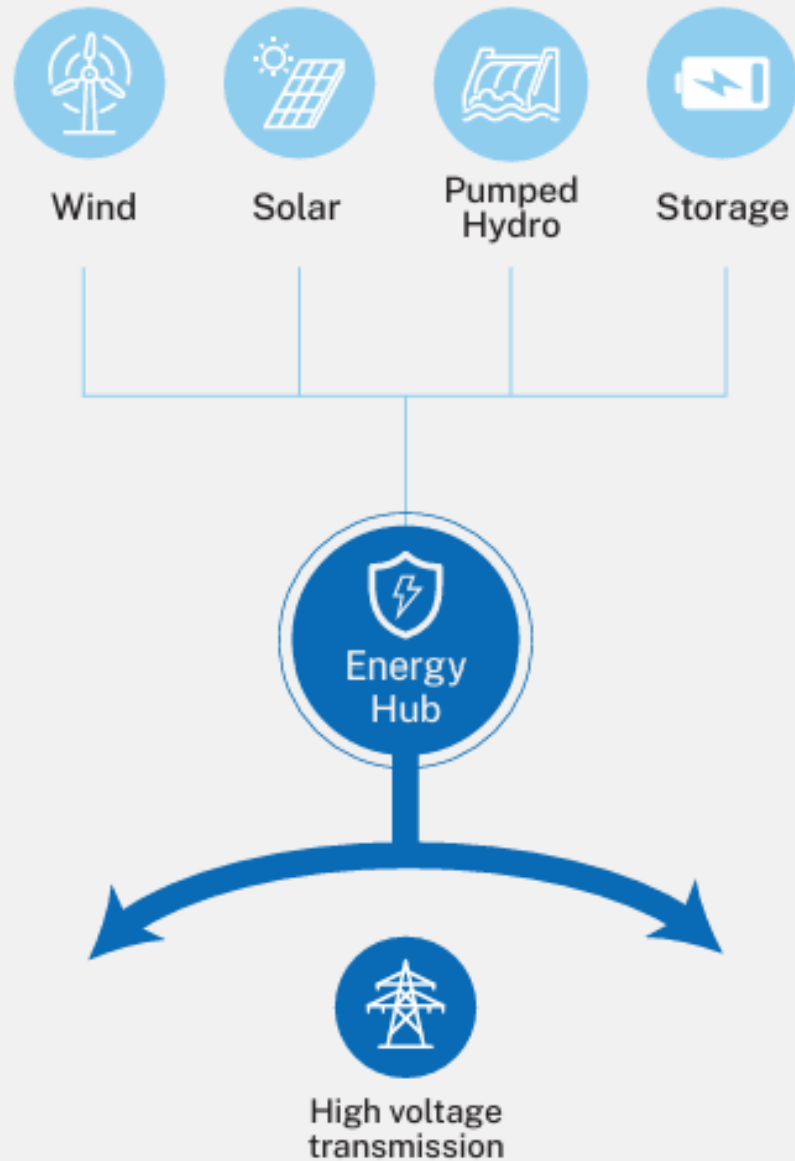
Central West Orana concept design: Artist's impression looking southwest from Blue Springs Road, Bungaba.

Energy hubs

- Large substations where electricity from multiple generators is collected and connected to the transmission network.
- Include switchyards, transformers and equipment to increase (“step up”) the voltage for efficient transmission.
- Designed with space to allow future expansion as more generation projects connect.

Energy hubs – transporting energy

Think of energy hubs like train stations. They bring all the energy from generation project (train lines) together, sort them and send them on the transmission network (main line).

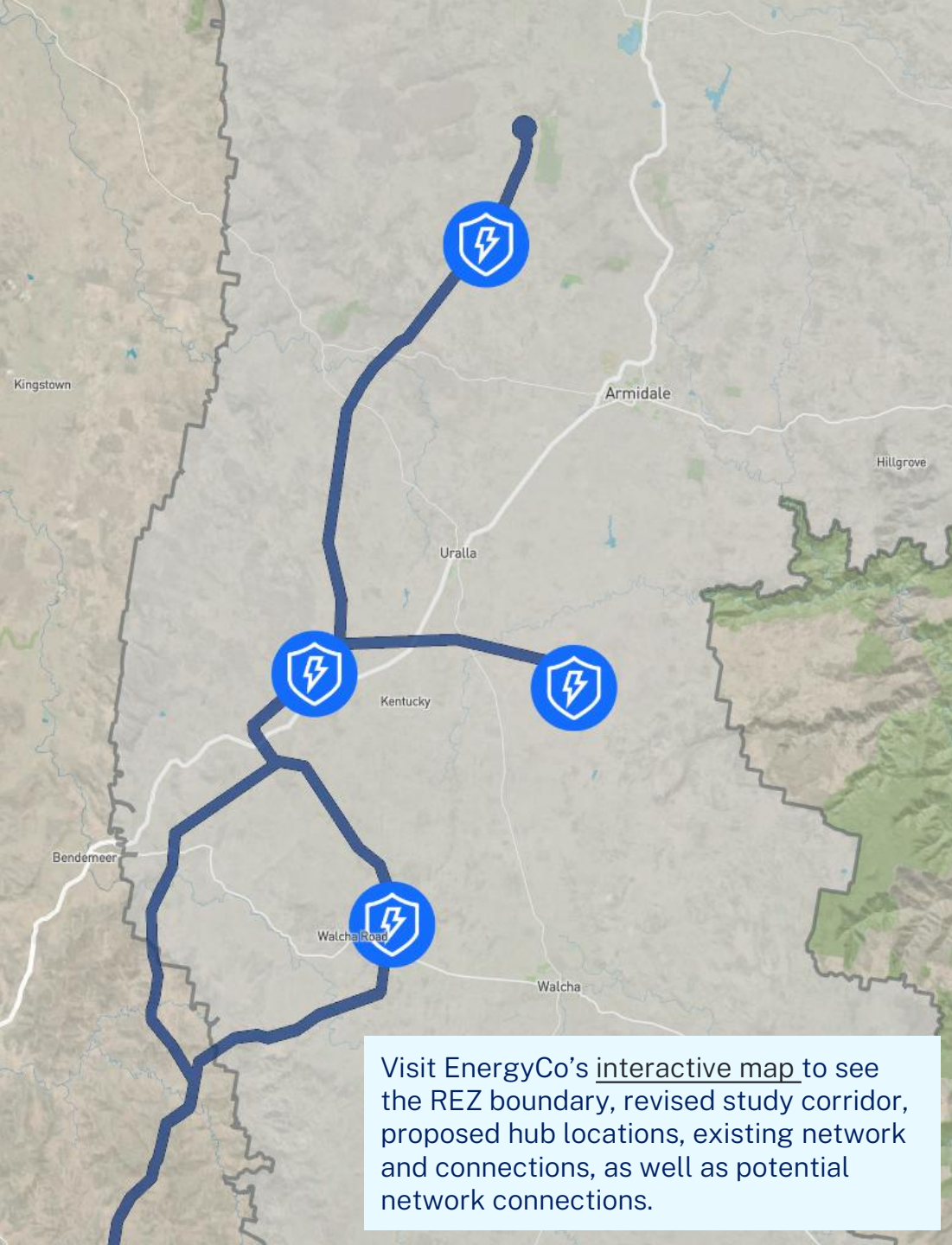


■ Undertaken by private developers ■ Planned and coordinated by EnergyCo

Energy hubs

Four energy hubs are currently being considered for the New England REZ.

- **Size:** Hub size depends on location, electrical equipment and site configuration.
- **Land area:** Hubs comprise benches for 500kV, 330kV and transformer equipment. The total disturbed area may require 25-30 Ha within a larger fenced site. Final size will be confirmed in design.
- **Land acquisition:** We're working with landowners to identify suitable land for infrastructure.



Visit EnergyCo's [interactive map](#) to see the REZ boundary, revised study corridor, proposed hub locations, existing network and connections, as well as potential network connections.

What would an energy hub look like?



Central West Orana concept design: Artist's impression looking west from Dapper Road, Dunedoo.

How does it all connect?

1 Generation

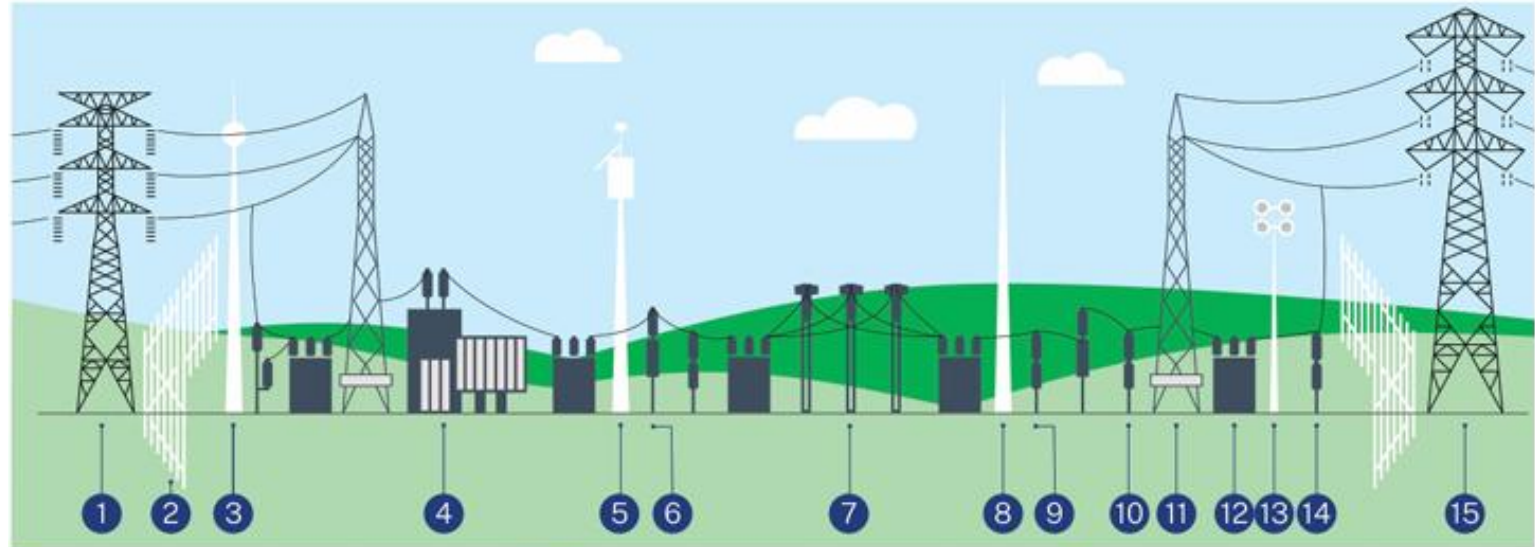
Wind and solar farms produce renewable energy.

2 Energy hubs

Energy is collected at substations, converted to a higher voltage.

3 Transmission lines

Carry the energy long distances to the main NSW electricity grid, where it is then distributed to homes and businesses.



1 330 kV transmission line tower which supplies renewable energy from solar, wind and storage projects

2 Fence

3 Communication tower

4 Power transformer

5 Weather station

6 Current transformer

7 Busbar

8 Lightning mast

9 Circuit breaker

10 Voltage transformer

11 Gantry

12 Line disconnector

13 Light pole

14 Surge arrester

15 500 kV transmission tower which forms the backbone of the REZ transmission network

Who's delivering the REZ?

Different organisations are responsible for planning, building and operating parts of the system that make the REZ work – from generation to transmission and connection to the grid.

EnergyCo: Plans and coordinates the REZ, acquires land for energy hubs and transmission corridors, manages environmental approvals and community engagement.

Network Operator: Will design, build, operate and maintain the transmission network and energy hubs.

Renewable energy developers (generators): Build and operate wind and solar farms that will connect to the REZ.





Armidale

What this means for your community



More reliable, affordable electricity for NSW



Jobs, investment and regional economic opportunities



Better planning = fewer impacts (shared hubs, single corridors)

EnergyCo



Tamworth

Your questions



Open Q&A – feel free to ask anything



Some questions may be noted in the Questions Register for a formal response



Fields near Walcha

We'd love your feedback



Was this session clear and useful?

Are there areas we should explain further?

Any suggestions for future sessions?

Thank you and what's next

- ✓ Thank you for your time and insights
- ✓ Please share what you have learned with your communities
- ✓ Next online CRG session: Wednesday 3 September 2025 (to be rescheduled – new date to provided when available)