

Do you need to detour?

The Central-West Orana Renewable Energy Zone (CWO-REZ) Transmission Project distributed a work notification on 17 April 2025 advising of their upgrade to the Merotherie Road and Golden Highway intersection. Merotherie Road will be closed to through traffic and drivers will be directed to use the Castlereagh Highway between Gulgong and Dunedoo.

In the notification flyer they stated that the *"...transmission project will build new high-capacity transmission lines, energy hubs and supporting infrastructure to transfer power generated by solar and wind projects to electricity consumers."*

They also stated that *"The initial operation is anticipated in 2028 and will initially unlock up to 4.5 gigawatts (GW) of network capacity."* In my mind, 4.5GW (4,500 megawatts or 4,500,000 kilowatts) of intermittent energy capacity is hard to envisage. To comprehend the implications of this statement we need more information. For instance, how much land will be required over two project lifetimes (50 years)? What is the cost? How much electricity will be generated? How does it compare with existing or future generating technologies?

Assuming a 50/50 split between industrial wind and industrial solar capacity and using figures available from the NSW Planning Department for site area, project cost and a 25 year lifespan for a 700MW wind works and a 400MW solar works it is possible to estimate the land requirements, project cost, and electricity supplied for the stated initial REZ capacity of 4,500 megawatts (MW) for a 50 years period.

The answers are staggering. 4,500MW solar and wind capacity will:

- **require 133,368 hectares or 1,334km² of Central West agricultural land and native habitat compared to 14.63km² for a modern base-load power station, almost 99% less land**
- **need project capital cost expenditure over 50 years of \$18.7 billion (excludes \$billions of new transmission lines and additional storage) compared to \$10 -13b for the equivalent 4,500MW capacity of modern base-load power stations, that is \$8.7b to \$5.7b lower cost**
- **only generate 154,250,000 MW hours of intermittent electricity, which is nearly 11 times less than the 1,675,350,000 MWh generated when required by equivalent capacity modern reliable, on-demand base-load power stations.**

To achieve an REZ initial capacity of 4,500MW there will need to be constructed the equivalent of 5.6 Stubbo solar works and 3.2 Spicers Creek wind works, which must be duplicated before 25 years have passed. But there are already dozens of such projects proposed for the CWO-REZ, when less than 9 appear to be required.

It is interesting to see how our more than 30% capacity of wind and solar is performing nationally. These two screenshots from NEMwatch Live Supply and Demand (www.nem-watch.info) showing the change in Australia's energy generation and demand on Friday 2 May 2025 from 17:50 to 21:15, a peak demand time. By 21:15, no solar, battery storage almost gone, and not much wind generation. The old staples of coal, gas and hydro still supply our reliable on-demand electricity.

Save Our Surrounding (SOS)

