Eastern and Western Cape to gain 3,470MW grid capacity for wind power

By Lindsey Schutters

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According to new amendments to its Generation Capacity Assessment, Eskom is ready to give the Eastern and Western Cape a big boost in wind power, adding up to 3,470MW. But this is only if the power producers agree to a possible 10% cut in power production. The Western Cape will get 2,680MW and the Eastern Cape 790MW.

Source: Athena/Pexels

To make use of this extra power by 2025, local renewable energy projects planned for around 2027 will need to be sped up. More projects will also be needed to integrate the renewable energy and avoid any issues with the local network.

But there's a catch. If local municipalities buy power and it's successful, and if it's located in the Western and Eastern Cape and used during busy times, it could affect the new power capacity. Some space has been made for rooftop PV in the power capacity for cuts, even though it wasn't specifically included.

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According to the GCCA 2025, projects in the Western Cape will be allocated to wind farms:

- The total generation at Komsberg and Kappa is limited to ~1425MW which is the firm limit with 4 x 500MVA transformers.
- The additional generation allocation at Droërivier is limited to 475MW which is the limit for the new 500MVA transformer.
- The additional generation allocation at Agulhas and Bacchus is limited to 140MW each i.e., which limits the total generation at these two substations to ~475MW each which is the substation firm limit.
- Nuweveld is a planned new substation which will require 2 x 500MVA transformers to accommodate 720MW. The limit is imposed at Nuweveld to ensure a short circuit ratio (SCR) of 3 with a single 400kV line from Droerivier.
- 200MW is allocated to Muldersvlei to make up for the remaining capacity in the Western Cape

Limitations on capacity

While the Eastern Cape projects can only be accommodated on the eastern side of the supply area because of congestion. These are the 310MW at Neptune and 480MW Dorper wind projects.

Eskom did note that if the demand for power doesn't grow as expected, or if it decreases, there could be more temporary reductions in power production, especially if all the new capacity is used for renewable energy.

On the other hand, large power consumers like data centres could help reduce these reductions if they are set up in the given timeframe and location.

ABOUT LINDSEY SCHUTTERS

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