

IS SOUTH AUSTRALIA ELECTRICITY GENERATION
SUSTAINABLE, AFFORDABLE & RELIABLE ?

THIS IS
ENERGY TRILEMMA

A photograph of a single white wind turbine standing in a dry, open field. The field is covered in brown grass and extends to a distant horizon. The sky above is a deep, dark blue, suggesting either dawn or dusk. The wind turbine's blades are visible against the light sky.

<https://energy-trilemma.netlify.app>

ENERGY TRILEMMA

PROBLEM

South Australia's high wind and solar share creates extreme wholesale price volatility and instability. The evening residual demand peak requires costly, inflexible firming capacity, stressing affordability for consumers through high retail bills and raising security risks due to heavy reliance on a smaller, essential fleet of conventional generators.

OUR PROPOSAL

- Implement a Dynamic Price Signal and Dispatchable Storage Initiative.
- Use steep Time of Use pricing to incentivize load shifting from the evening peak to the midday VRE surplus.
- Offer targeted subsidies for grid integrated batteries that discharge during peak times.

Inorder to enhancing reliability and reducing price spikes.

ENERGY TRILEMMA

A photograph of a wind turbine at dusk or dawn. The sky is a gradient from deep blue to orange and yellow near the horizon. The wind turbine's blades are dark silhouettes against the lighter sky. The background shows a vast, flat landscape with some distant buildings and trees.

DATA
GITHUB
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WEBSITE - DASHBOARD

DUY, DEEVIT, ZAC

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