

Kangaroo Island could be powered by 100 percent renewable energy

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Kelly Hill Conservation Park, Kangaroo Island. Credit: CC 3.0 pauljill flickr

South Australia's iconic Kangaroo Island could be powered by up to 100 per cent renewable energy at a comparable cost to replacing the aging undersea electrical cable connecting the island to the mainland grid, a

new study announced today.

The Towards 100% Renewable Energy for Kangaroo Island research study was completed by the Institute for Sustainable Futures (ISF) at the University of Technology Sydney. The study was assisted by RenewablesSA and the Kangaroo Island Council.

ISF Research Director and lead author of the study Chris Dunstan said the project demonstrates the very real potential of renewables to generate clean, reliable and cost-effective electricity for edge-of-grid communities like Kangaroo Island.

"10 local electricity supply scenarios were modelled as alternative sources of power for Kangaroo Island," Mr Dunstan said.

"Replacing the 15km undersea cable is estimated to cost \$77 million over a 25-year period, which includes \$36 million for the cable and \$37 million for the imported power.

"The most cost-effective alternative is a local supply of wind, solar photovoltaics and diesel generation, complemented by battery storage and demand management. This wind-solar-diesel hybrid solution could supply Kangaroo Island with 86 per cent renewable energy for only \$10 million more than a new cable option.

"For a further \$13 million, 100 per cent renewable power could be provided by upgrading diesel generation to cutting-edge biomass technology fuelled by unharvested local plantation forest.

"Both renewable energy supply options could actually cost Kangaroo Islanders less than the new cable over a 25-year period when indirect costs like savings in local network charges are included," Mr Dunstan said.

Kangaroo Island Mayor Peter Clements welcomed the study, saying, "Kangaroo Island has a wealth of wind, solar and biomass resources. Developing a mini-grid to take advantage of these natural assets and produce reliable, affordable power is a win-win for the island's residents and businesses."

Chief Executive Officer of the Kangaroo Island Council, Mr Andrew Boardman said, "There is more work to be done to develop our options, but this study shows Kangaroo Island has great opportunities for economic and renewable energy leadership. A pathway to 100 per cent [renewable energy](#) supply can deliver greater local economic development, strengthen energy resilience and enhance the island's reputation as a unique environmental icon."

A public forum will be held on 22 September in Kingscote, Kangaroo Island to share the study's findings and canvass community views about future power supply options.

More information: The study report is available online: [www.uts.edu.au/research-and-te ... energy-and-climate-6](http://www.uts.edu.au/research-and-te...energy-and-climate-6)

Provided by University of Technology, Sydney

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