

The new energy transition

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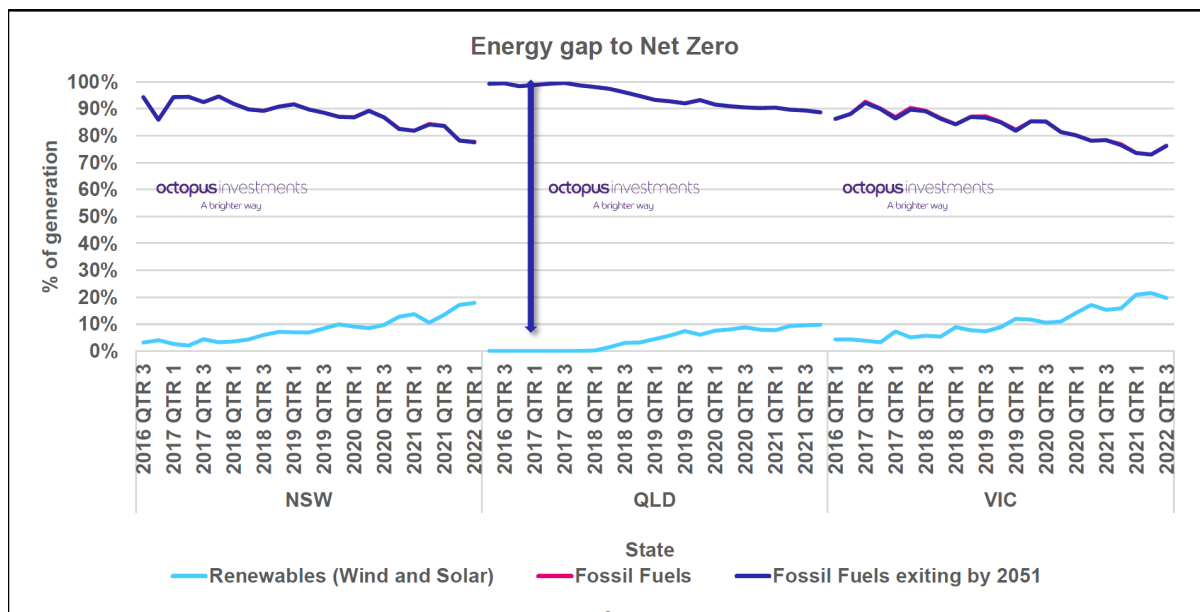
Australia's challenging energy transition presents opportunities for investors

Australia faces a huge task to build enough renewables and upgrade the electricity network as coal burning power stations are decommissioned on the path to net zero by 2050.

“The pace at which we are building and generating renewables has to go up by almost four times if ever we are to have a chance to replace the generation that's leaving the market in the next ten years,” according to Octopus Investments Head of Energy Markets, Lumi Adisa.

When the Hazelwood power plant closed in 2017, average energy prices doubled during the day and tripled during peak periods, Adisa said.

Energy prices will continue to rise as demand increases but supply declines – about six times the coal capacity of Hazelwood is forecast to leave the market starting with AGL's Liddell Power Station over the next year. It supplies about 12 per cent of NSW's power and is due to close by mid-2023.

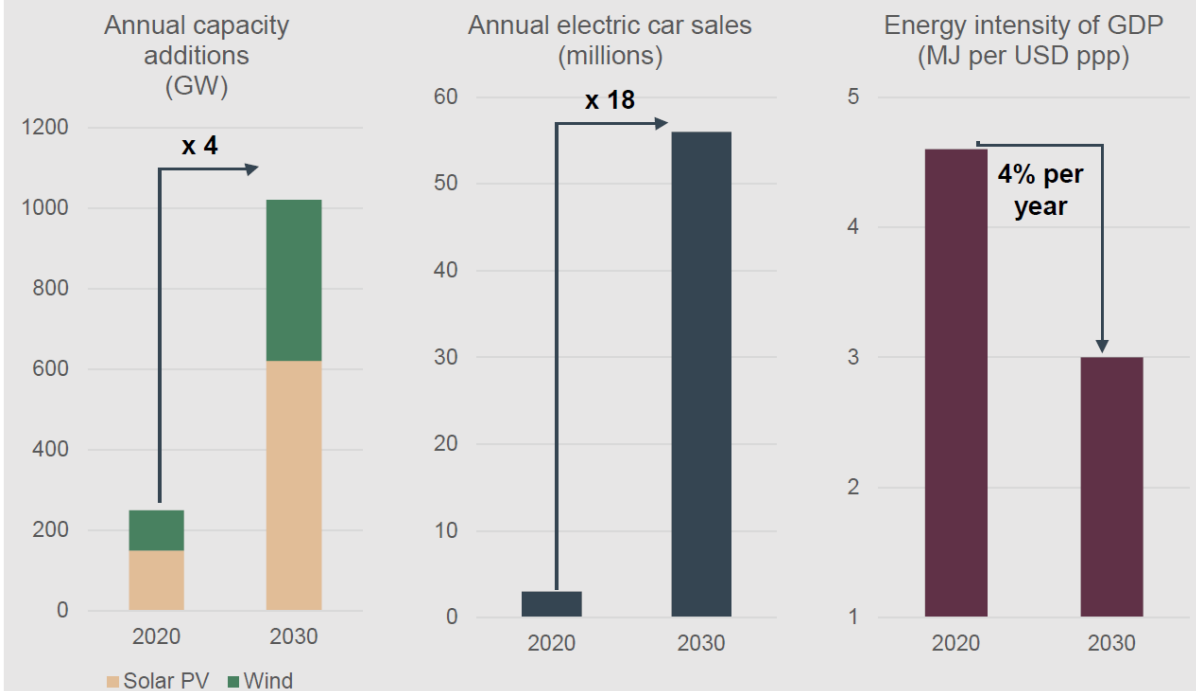


QIC Global Infrastructure Partner, Angela Karl, said this was also an opportunity for investors, with the Australian Energy Market Operator's Draft 2022 Integrated System Plan predicting renewable's share of total annual generation will rise from about 28 per cent in 2020-21 to 79 per cent by 2030.

Regional Australia could become a world leader in the renewables industry with a focus on the hydrogen export industry. However, investors also face risks such as an ageing network that requires significant investment to support more renewable energy.

“In Victoria, we currently have 500 megawatts of built wind capacity that has not dispatched a single electron,” Karl said, highlighting network issues.

WHAT NEEDS TO HAPPEN: Key clean technologies ramp up by 2030 in the net zero pathway



Frontier Advisor's Head of Real Assets, Manish Rastogi, also backed Australia's ability to create a hydrogen-based industry over the next 10 to 15 years. The 2020 European Green Deal has also encouraged investors to start looking at these technologies.

"We have the ability to achieve decarbonisation and provide clean fuel for the rest of the world," Rastogi said. "We are that lucky – we are truly blessed in Australia and I would argue that investors need to start to look at this."

Green hydrogen is produced by utilising electricity generated from renewable sources to operate large-scale electrolyzers to split water into hydrogen and oxygen gas molecules. The hydrogen can be used as a clean fuel source. However green hydrogen is still 40 per cent more expensive to produce than grey hydrogen which uses natural gas as an energy source.

"The road to net zero or the road to decarbonisation is going to be very bumpy," Rastogi said. "The whole point is you need to invest in technologies that are going to help decarbonisation."

The election of the Labor Party into government, and its plan to cut greenhouse gas emissions by 43 per cent by 2030 – well above the Liberal Party's previous target – may also provide a firmer policy footing for future investment.

Frontier produced two research papers earlier this year on the energy transition, which can be found [here](#) and [here](#), after the team conducted a virtual research trip to Europe.