

Project finance with Asian wind swaps: are ‘average price’ derivatives *bankable* in Australia’s NEM?

Paul Simshauser

This article asks a practical financing question: can a standardised ‘average price’ financial contract, known as an Asian wind swap, help a new wind farm secure project finance in the same way that conventional long-term runoff-plant Power Purchase Agreements (PPA) have done in the past? This issue matters, because renewable investment in Australia’s National Electricity Market (NEM) has slowed since 2023, just as governments need more new wind and solar projects to replace coal-fired power stations. Run-of-plant PPAs have become harder to arrange, and the Australian Government’s ‘Capacity Investment Scheme’ was only ever intended to be a temporary bridge rather than a permanent solution.

An Asian wind swap is a financial derivative that gives a wind farm a fixed price, but settles against the average price earned by all wind farms in a region, rather than the price earned by one particular wind farm project. At first glance, this looks risky because an individual wind farm may produce more or less than expected, and its own price may differ from the fleet average. This article tests whether those risks are large enough to stop banks from lending, or whether they can be measured, priced and managed.

The analysis uses South Australia as a deliberately difficult test case because it already has very high wind and solar penetration, no coal generation, imperfect interconnection and volatile prices. A bootstrapping model takes ten years of half-hourly South Australian spot price and wind production data and converts this history into 10,000 synthetic years of market outcomes. The modelling suite then tests different wind farms, different hedge levels and project finance outcomes over 1000 valuation and profit financing debt-sizing runs.

The central result is that, if the risk-adjusted hedge quantity is chosen carefully and the strike price is calibrated to project entry costs and local basis risk, an Asian wind swap can make wind farm revenues look very similar to a traditional PPA from a lender’s perspective. For the four modelled 100MW wind farms, the optimised Asian wind swap supports project finance gearing

of about 70%, broadly equivalent to a conventional PPA. Revenue volatility falls sharply compared with a merchant wind farm and, at the optimal hedge level, is close to the volatility produced by a run-of-plant PPA.

The findings are not presented as universal: they depend on South Australian data, historical price-output relationships and the assumed strike price design. Other regions and future market conditions would need their own testing. But recent work by Nolan et al., (2026) arrive at similar results for the derivative in the New South Wales region.

The policy message is that renewable bankability does not have to rely only on PPAs, or bespoke taxpayer-backed Contracts-for-Differences. A well-designed Asian wind swap could provide the long-term revenue stability that banks need, while also being more standardised, divisible and tradable than bespoke PPAs or CfDs. If developed properly, this could support renewable investment, improve forward market liquidity, help retailers manage risk and reduce reliance on bespoke government-originated CfDs.

Contact	p.simshauser@griffith.edu.au
Publication	September 2026