

Market update

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“Given the possible early retirement of Loy Yang B was not anticipated in AEMO’s Integrated System Plan (ISP), filling the potential gap of the station’s early exit creates opportunities and challenges for the market from a system reliability, security and affordability perspective”.

Early coal closure signalled: a sign of things to come?

The news from Alinta this week that one of Victoria’s largest coal plants is unlikely to see out the full length of its licence should not be a major surprise to the market.

The 1.1GW Loy Yang B station has a licence to run until 2047 and is Victoria’s newest brown coal generator. But the owner is expecting the “significant transition” being seen in the National Electricity Market to reduce the economic life of such assets.

Alinta CEO Jeff Dimery suggested life for coal-fired generation in Australia would become a “struggle” by the early 2030s.

Loy Yang B currently operates at baseload and provides a vital contribution to electricity requirements in Victoria – it provides around 20% of power in the state. As shown in the figure opposite, the plant supplied a consistent block to help meet demand over the last financial year. Replacing this with intermittent technologies would require substantial firming.

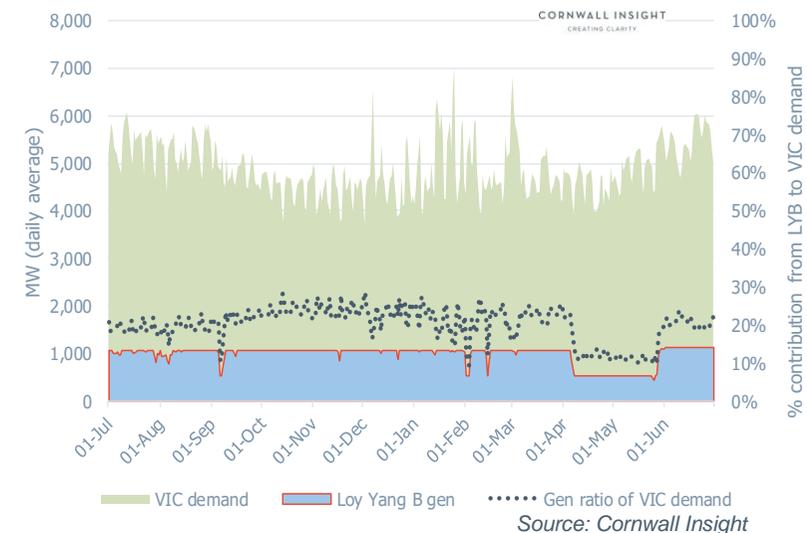
The asset is also the most efficient brown coal generator in the area and the company has recently spent \$170mn to improve its reliability and efficiency.

While in other countries such as the UK and Germany, the move away from coal has been hastened by government closure deadlines (2025 and 2038 respectively), it currently looks likely that Australia’s coal assets will be edged out by an evolving generation mix, less favourable economics and changing system needs.

The possibility of an early closure at Loy Yang B follows other recent announcements on coal plant closures (for instance, Energy Australia’s Yallourn is earmarked to shut in 2029-32) and goes against the federal government’s expectation that coal will provide crucial reliability and cheap electricity over the long-term.

The drivers of these announcements have included the increasing roles of renewables (wind, solar and hydro) and storage (mainly batteries and pumped hydro). There has been a downward trend in costs for some of these technologies: a

Loy Yang B’s contribution to Victoria power demand (2018-19)



recent report from IRENA suggested the global electricity cost of solar PV and onshore wind had fallen by some 13% from 2017 to 2018.

Australia’s coal generation assets are aging. The fleet is approaching 30 years on average, while the design life of the generators is typically 40-50 years.

The market faces crunch decisions on replacing the aging fleet: life-extend the existing stations; build new coal (not really a viable option); or deploy other generation such as renewables, nuclear (a new option the federal government is considering) and gas. IRENA suggested building new onshore wind and solar PV is “on the verge of costing less than the marginal operating cost of existing coal”. But with greater renewables penetration, there will be greater need for flexibility and firming, whether that be from storage, fast-ramping gas plant or demand side – or most likely from a combination of these technologies.