

Chart of the Week

Issue 26

19 March 2020



Lumi Adisa

Lead Consultant – Market Analysis

+61 460 335253

l.adisa@cornwall-insight.com.au

“In NSW, over the last three calendar years, black coal on average delivered between 71% and 89% of customer load in the state. Interestingly, 75% of the top five monthly averages occurred within the last two years with last December seeing an average contribution of 86%”

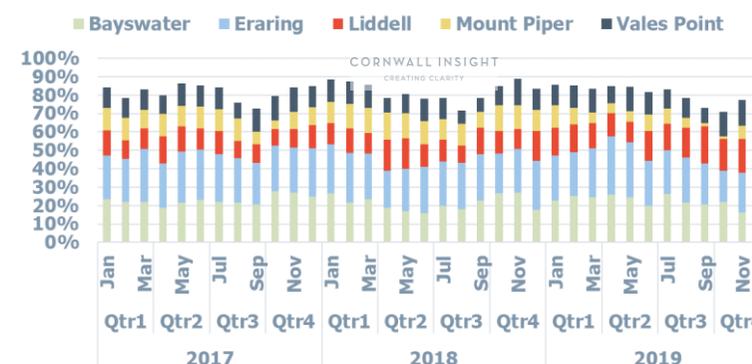
A transition period is a period between two transition periods

As Australia’s energy transition enters a new decade, a big part of the first quarter has focused on solutions for higher levels of renewable integration into the grid. Given the level of attention on these integration issues, perhaps now is the time to take stock of the last decade and gauge exactly where the NEM is at in its transition. In this Chart of the Week, we explore the role of black coal in meeting demand in New South Wales (NSW) - Australia’s largest region by customer load – in the final three years of the past decade. This analysis provides commentary on the pace of the energy transition as well as its rate of change.

Whilst on an installed capacity basis, the trend seems to signal a “quickenning” transition with coal at less than 60%, the actual contribution of coal to energy delivered to consumers paints a different picture. In NSW, over the last three calendar years, black coal on average delivered between 71% and 89% of customer load in the state. Interestingly, 75% of the top five monthly averages occurred within the last two years with last December seeing an average contribution of 86%. For context, coal contributed 91% to demand in NSW in 2008 - twelve years ago. These numbers disagree with the widely held assumption that the actual *energy* transition is happening at a rapid rate. They however emphasize the presence and size of two market fundamentals: *opportunity* and *risk*.

In the next decade alone, ~10 GW of coal-fired capacity is set to retire and by 2035 ~14 GW will be exiting the market; 10 GW of which is in NSW. According to the Australian Energy Market Operator’s (AEMO’s) [Draft Integrated System Plan 2020](#) (ISP), over 30 GW of new renewable generation is needed to replace coal-fired generation by 2040. The unavoidable need to substitute this very significant baseload energy contribution will ensure good value remains in the market not only for renewable investment, but for storage interests too. In addition, the size and timing of the potential energy gap could be brought forward by earlier-than-expected coal exits due to flexible generation requirements and age (provided the market keeps its current energy-only

Figure 1: Black coal contribution to NSW demand (2017 to 2019)



design). The question to be asked is therefore not one of market value (with over \$17 billion traded through the NEM in 2018 alone, the market is not lacking in value for investors), but market readiness.

Whilst the ISP maps out a definitive plan for the replacement of these power stations, the development of the network backbone to underpin the transmission of energy from these projects can experience significant delays. The draft ISP maps out 5 actionable “near-term and future” priority transmission upgrades necessary to further develop renewable energy zones in the next decade. This timeline forms a firm, but delicate balance between investment interests (replacement of retiring coal plants) and regulatory processes. We cover updates on these regulatory processes in our **Market Alert** subscription service.

In summary, whilst coal is expected to continue delivering substantial volumes to customers in the near term, the question remains: for how long? The impending energy void over the coming decade would inevitably create opportunities for investment. Opportunities, which in turn, will be subject to the pace of regulation. If you’d like to find out more about our **Future Investment and System Outlook Report**, feel free to drop us a line: enquiries@cornwall-insight.com.au.