CORNWALL INSIGHT
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Chart of the Week

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"Our modelling, from our Q3 Benchmark Power Curve update, suggests that Liddell's exit will not have a significant impact on prices in the NEM – a small increase of around $6/MWh driven largely by counteracting effects of increased peak pricing and lower midday prices. This is primarily because Liddell will be replaced by renewable energy sources (thanks in part to REZ development and increased interconnection) with remaining thermal capacity meeting the requirements."

Need a little controversy; 'cause it feels so empty without me?

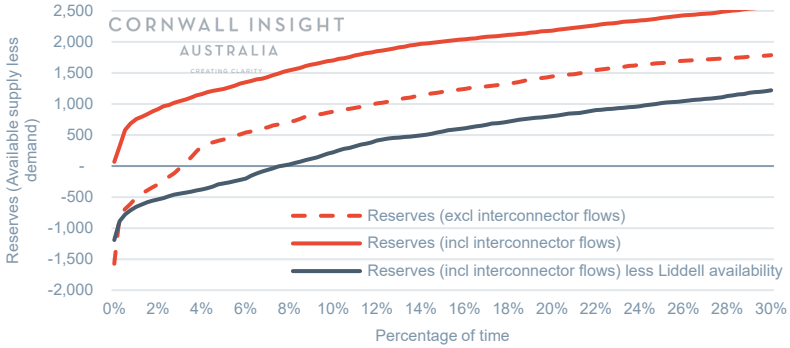
Last week, in our chart of the week we wrote about the Federal Government's announcement surrounding the replacement of Liddell with 1,000 MW of 24/7 dispatchable gas capacity. A week can be a long time as this figure has now fallen to 250MW – much more in line with AEMO's suggestion in the ESOO that only 154 MW of capacity would be required. With the focus on Liddell (again), we thought it useful to explore how it has performed and what the impacts of its exit look like.

Despite concerns over its reliability, Liddell had at least three units in service 90% of the time in FY2020 meeting ~15% of NSW's total energy requirements. When online, units typically ran around 350MW ± 50 MW depending on the # of units online and system needs. This seems to be the sweet spot to ensure that the unit remains as stable as possible until its scheduled closure.

While this performance is promising, Liddell's exit will still leave a hole to be filled. Our modelling, from our Q3 Benchmark Power Curve update, suggests that Liddell's exit will not have a significant impact on spot prices in the NEM – a small increase of around $2/MWh driven largely by counteracting effects of increased peak pricing and lower midday prices. This is because Liddell will be replaced by renewable energy sources (thanks in part to REZ development and increased interconnection) with remaining thermal capacity meeting the requirements. As such, overall energy output should be balanced over the near term with a larger impact expected in the cap market.

But what about reliability in peak periods? Looking back at FY2020, and intervals where demand > 10 GW (~5% of total), we see that the instances of NSW having a lack of reserves to meet peak demand is very limited. Reserves in this context refers to ability of available supply to meet local NSW demand. NSW had reserves <1,000 MW, 2% of the time. Removing the availability of Liddell, NSW would have reserves <1,000 MW reserve 24% of the time. Whilst this seems like a large number, currently NSW is reliant on other states to meet peak demand 11% of the time where.

Figure 1: NSW reserves duration curve (FY2020)



It is important to caveat that this does not account for new investment to be made in the near term or taking into account strategic reserves like demand response such as Tomago Smelter where shutting down one of its three potlines can shave ~300 MW off demand. It does however highlight that as coal exits the market, other technologies will need to shoulder much more of the peak load than ever before while remaining agile to fluctuating conditions.

The market has known of Liddell's exit well ahead of time to formulate their strategy to fill the gap. The federal govt would prefer a "like-for-like" replacement. However, we must be careful with phrases like this – any replacement should reflect the future requirements of the NEM, and not stifle market participants and investors from filling the gap in a way that best suits the way the NEM is transitioning.

It does raise an interesting question going forward. If this level of attention has been focussed on Liddell closing, what does this mean for the near future (next 10-15 years) where more than 10 GW of coal capacity is expected to close their doors? Will the government step in to delay closures? As the old saying goes… we will cross that bridge when we get to it. But we need to make sure that we see the bridge coming as well as the terrain that you will have to overcome to get there. To help you do that, we have our Energy Market Perspective service. Get in touch for details on how we can help you navigate the future.