

Chart of the Week

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December 2020: when Santa brought low temperatures & prices

With just about half of summer left to go, many keen NEM observers would agree that it has been a pretty mild journey so far; at least as far as the NEM is concerned. But how mild are we talking here?

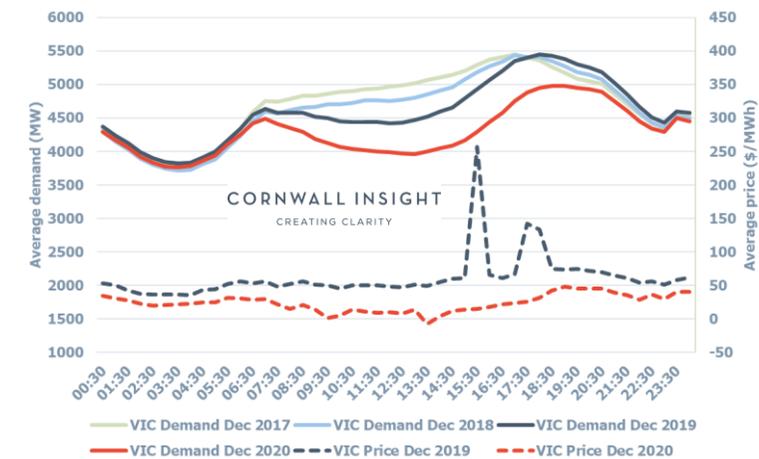
In this Chart of the Week, via a time-of-day analysis, we examine demand and pricing for the first full month of summer (December 2020) in Victoria. Comparing events from last month with previous years, we provide commentary on drivers for these rather unique outcomes, as well as the impact the ongoing energy transition is having on prices in the NEM.

As shown in Figure 1, last December was quite an outlier compared to previous years in both demand and merchant pricing terms. Average monthly demand for December experienced the highest year-on-year drop (~300MW) in at least 4 years last month; about 7 times that of the previous two years (Dec 2018/Dec 2019). For comparison, average December demand only saw a drop of ~44MW between 2018/2019 and ~77MW between 2017/2018.

Examining the average time-of-day trends, demand during the day (9AM–5PM) last December dropped by an average of ~500MW on December 2019 levels. Admittedly, the growth of rooftop solar between both years is also complicit in this result; with cooler temperatures further exacerbating this impact on demand. The most striking outcome, however, is seen in peak demand levels after sunset. Since 2017, average December demand during evening peaks (5.30PM-7.30PM) has risen year-on-year (~67MW for both 2018/2019 and 2017/2018). However, last month, average evening peak demand dropped by an astonishing ~444MW on December 2019 levels.

Unsurprisingly, this drop in demand seen last December had a strong impact on prices in the state. In fact, the average price last December (~\$24/MWh) was the lowest monthly average seen in the state since March 2012.

Fig.1: VIC time-of-day demand vs prices (Dec 17-20)



For context, the average December price for 2018 and 2019 were ~\$92/MWh and \$61/MWh respectively. During the day (9AM-5PM), average December prices between 2019 and 2020 dropped by ~\$55/MWh. For the evening peak, this drop increases to ~\$61/MWh.

Admittedly however, demand (cooler temperatures) alone is not responsible for this outcome. With new low-cost renewable capacity coming online in the state between 2019 and 2020, Victoria has seen a significant increase in renewable generation between both years. On average, the state generated ~420MW more (predominantly from wind) during the evening peaks in December 2020 than it did in the previous year. Gas, on the other hand, saw its role in meeting peak demand in December significantly impacted with ~360MW less of gas generation utilised during the same peak period in 2020 than in 2019; further impacting peak pricing outcomes.

For more on pricing insights, join us on our upcoming free webinar ‘[Power price insights and trends](#)’ next month as we take a further look into events this summer and beyond.