Introduction

2025 is the Year of the Snake, according to the Chinese Zodiac. More specifically, the year of the 'Wood Snake'. For those born under the snake sign, 2025 can be a year of empowerment, transformation and potential for growth provided challenges can be navigated effectively. And it is the *potential for growth provided challenges can be navigated effectively* element that brings us to referencing the Year of the Snake and snakes in general this quarter. In this quarter's articles we look into the growth of Data Centres and some of the quirky market shenanigans (with references to the snake eating itself). We also look at the energy generation infrastructure buildout and that we're shortly to witness an influx of capacity (and hence a reference to the pig passing through the snake) and its implications. Shifting away from reptiles, and maybe for those who like high frequency trading strategy or trading algorithms competing against themselves, our final article looks at the concept of Percentage of Perfect in autonomous bidding optimiser software for battery dispatch.

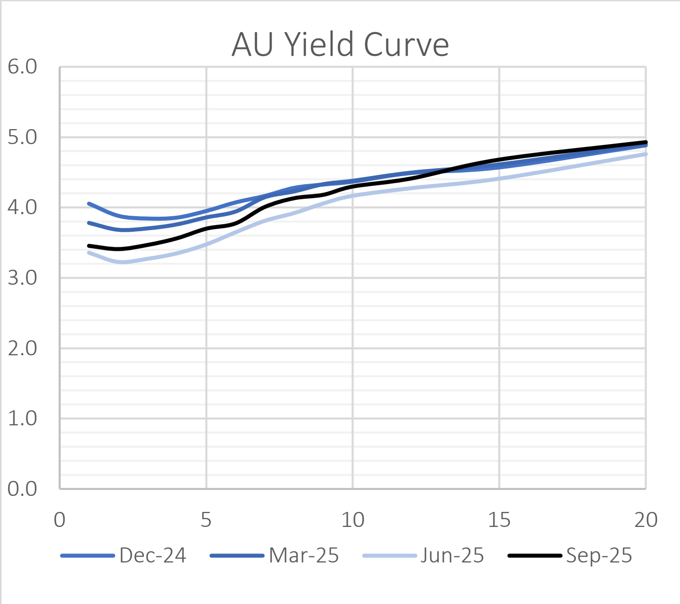
Markets Update

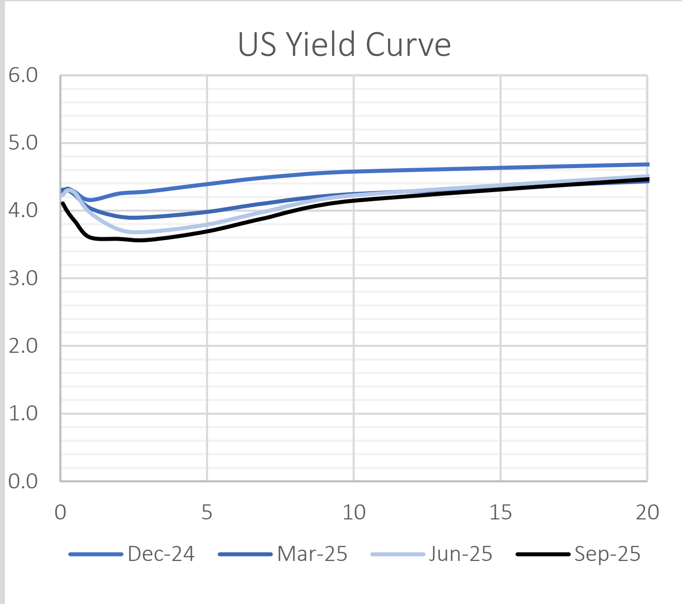
After keeping rates steady at first four meetings of the year, the Federal Open Market Committee (FOMC) delivered its first rate cut of 2025 in September, lowering the target range by 25 basis points to 4.00%-4.25%. This was characterised as a "risk management cut", aiming to offset the uncertainty of future economic conditions created by US economic and trade policy (as reflected by a volatile US yield curve during the quarter).. The latest Fed dot plot points to two additional 25 basis point cuts before year end, although the Committee has signalled a data-dependent approach.

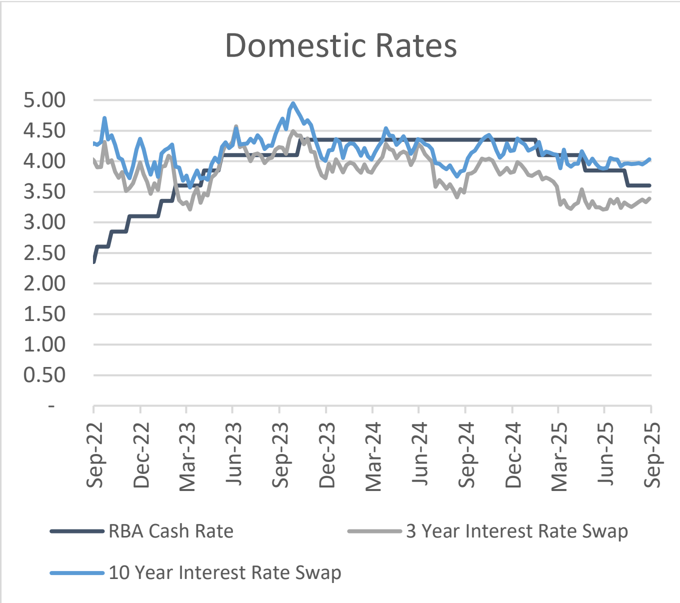
Whether these rate cuts will eventuate is uncertain. Real GDP in August remained strong at an annualised 3.3%, supported by consumer spending and business investment. Additionally, during the month, headline inflation and core inflation remain elevated at 2.9% and 3.1% respectively. Inflation is expected to increase with the 90-day tariff pause expiring on 1 August, and most reciprocal tariffs reinstated on 7 August. Though some countries secured bilateral deals to limit the tariffs, many importers once again face the prospect of substantial cost pressures. Inflation has created expectations of compressed economic growth. This is reflected by a cooling down of the labour market with unemployment at 4.3%.

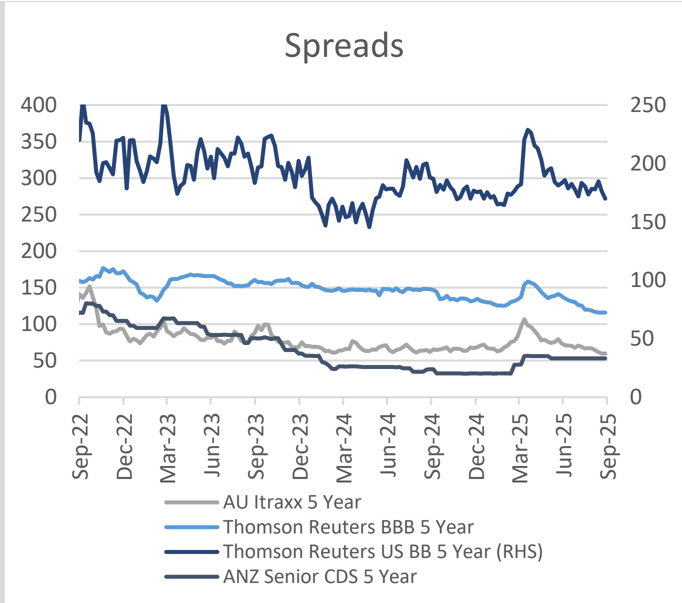
In Australia, the Reserve Bank of Australia (RBA) delivered another rate cut, bringing the cash rate down by 25 basis points to 3.6%. Trimmed-mean inflation has remained around 2.6%, while headline CPI rose to 3% in August, driven by energy and utilities. Labour market conditions remain firm at 4.2% unemployment. The August RBA minutes highlighted that policy easing is flowing through to mortgage repayments and supporting consumption, while cautioning that markets may be pricing too much further easing. Governor Bullock told parliament in late September that the economy is "in a good place", with inflation back within the 2-3% band and labour markets still strong, leaving the RBA "room to move if needed" should global trade deteriorate. With a reduced likelihood of near-term rate cuts, the Australian yield curve has marginally shifted up since last quarter.

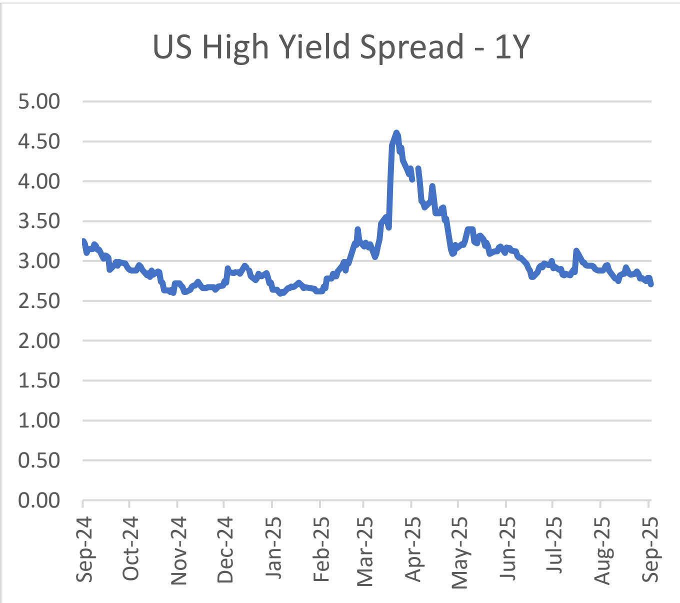
Credit spreads across Australia and the US have tightened over the past three months reflecting investor confidence in the global economy. There is increased optimism that a worst-case scenario global trade war can be averted, improving the outlook for the corporate sector. In the US, this is quite contrary to the rates market. While the market is pricing future rate cuts to support a slowing economy, credit market is signalling there is no growth issue.

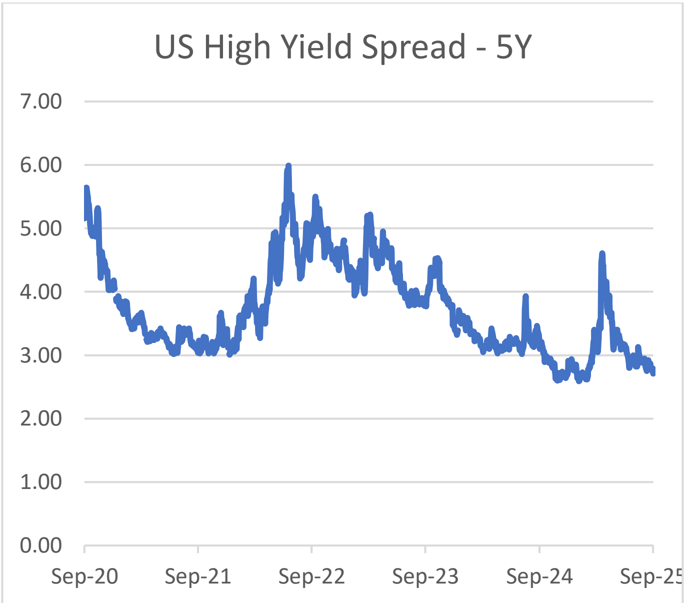












Source: Refinitiv Eikon, ICE BofA US High Yield Index Option-Adjusted Spread

New issuance and refinancing

Detailed below is publicly available infrastructure debt issuance for the quarter:

Date	Borrower	Instrument	Size ($m)	Term (Yrs)	Pricing (bp above BBSY)
03-Jul-2025	Brisbane Airport Corp Ltd	Loan	600	14.9/6.9	155/125
04-Jul-2025	WEBESS01 FinCo Pty Ltd	Loan	351.8	4/2.25	
30-Jul-2025	Bright Energy Investments Pty Ltd	Loan	300	5	
30-Jul-2025	HMC Energy Transition No. 3 FinCo Pty Ltd	Loan	640.29	5	
31-Jul-2025	AGL Energy Ltd	Loan			
14-Aug-2025	ARIF FinCo Pty Ltd	Loan	700.73	5/7	
21-Aug-2025	Tellus Holdings Ltd	Loan	240	5	
26-Aug-2025	Airtrunk Pty Ltd	Loan	5900		
27-Aug-2025	Pacific Green Technologies	Loan	77	2	
29-Aug-2025	Columboola Solar Farm Fin Co Pty Ltd	Loan	182.4	2	
03-Sep-2025	NEXTDC Ltd	Loan	3500	7.25/5.25	165/150
04-Sep-2025	Akaysha Energy Pty Ltd	Loan	300	3	
10-Sep-2025	Together Housing (Queensland) Ltd	Loan	210	5	
11-Sep-2025	Arc Infrastructure WA Pty Ltd	Loan	400	7/10	150/175
11-Sep-2025	Marinus Link Pty Ltd	Loan	3000	9	
25-Sep-2025	NSW Electricity Networks Finance Pty Ltd	Loan	600	6/9	115/145

Source: LoanConnector

Equity and other news

- The Energy Security Corporation, the newly created green bank for the New South Wales state government is now open for business with $1 billion of seed funding. Their focus is on investment gaps for the transition away from coal, particularly in relation to long duration storage options in battery and pumped hydro, and virtual power plants.
- AGL acquired 100 per cent of the South Australia Virtual Power Plant (VPP) from US battery and EV giant Tesla, now taking control of more than 7,000 Powerwall home batteries.
- AGP-backed renewables developer Ampyr Energy Global secured $340 million in debt financing for its Wellington stage one 300MW battery energy storage system project in regional NSW. Ampyr continues to seek to raise additional funds for stage two from equity funding.
- EnergyAustralia sold 50 percent stake in the $700 million four-hour Wooreen battery (350 MW/1,400 MWh) in the Latrobe Valley to Banpu Energy Australia, the local subsidiary of the Thai energy giant.
- The 200MW/400MWh Greenbank battery project in Long in Queensland kicked off commercial operations owned by Queensland government owned CS Energy.
- The Golden Plains wind farm in Victoria is now officially the biggest operating wind farm in Australia at 560 MW.
- Spanish energy giant Acciona is seeking to divest at least 50 per cent of its stake in the KER facility, a waste-to-energy plant.
- HMC seeks to raise $1 billion for its energy transition fund following HMC's $950 million acquisition of a portfolio of wind, storage, and solar projects in Victoria from Brookfield which was previously owned by Neoen. The fund

will combine those assets with HMC's seed clean energy asset (StorEnergy) to create the revamped energy transition platform.

- Atmos Renewables, an Australian renewable and storage developer has acquired the full ownership of 316 MW Hornsdale wind farm in South Australia from co-investor, Neoen.
- British core-plus infrastructure investor, Foresight, has finalised a $700 million debt refinancing for its Australian Renewables Income Fund.
- Perth's Plico Energy, a virtual power plant business backed by Swiss investor SUSI Partners, has been placed on the auction block, led by KPMG. KPMG is shopping Plico with an 18.9 per cent market share of small-scale battery installations in WA and ambitions to expand into the NEM.
- Australia's biggest battery, the Collie battery owned by Neoen Australia is now fully operational at 560 MW/2,240 MWh over its two stages.
- Data centre giant NEXTDC enlists Morgan Stanley and Cadence Advisory for $15 billion joint venture partner search to fund 850 MW of new hyperscale data centre capacity.
- Orica's Hunter Valley Hydrogen Hub has become the second project to receive funds from the federal government's Hydrogen Headstart program, as the ARENA put another $2 billion for more green hydrogen projects. Orica will receive $432 million for its proposed 50 MW green hydrogen electrolyser facility in NSW.
- Thai-based energy giant, Banpu, has bought another big battery project, adding the 103 MW/206 MWh Kerang battery in Victoria's Lodden Valley to its half share of the Woreen battery.
- Lightsource BP is in exclusive discussions with the Macquarie-backed Aula Energy to offload its extensive portfolio. Lightsource BP is part of the British oil giant and had been working to sell a 1,037 MW portfolio of solar farms to Beijing Energy International Holding, however the deal got stuck in a Foreign Investment Review Board (FIRB) review. Now, Lightsource bp is closing in on an agreement with Aula Energy.
- TagEnergy, the owner of Australia's biggest wind project, announced the purchase of a six-gigawatt pipeline of renewable and storage projects from Ace Power, a German-owned early-stage renewables developer.
- Igneo Infrastructure Partners is poised to sell Clarus Group, the owner of one of the biggest gas and electricity distribution networks in New Zealand at more than $2 billion. Brookfield alongside Kiwi Gas and electricity distributor Powerco are in advanced stages of the acquisition.
- Wollemi Capital acquired ASX-listed renewable energy developer MPower for $19 million and will invest more than $100 million in mid-scale solar and battery projects.
- Intellihub, the smart metering business owned 50-50 by Pacific Equity Partners and Brookfield, is preparing to sign off on a $3 billion debt refinancing.
- French energy giant Engie has hired Rothschild to advise on the purchase of Metlen's Australian renewables portfolio, totalling 520 MW plus in operational or under-construction assets as well as a 2.9 GW pipeline.
- Giant Canadian pension fund La Caisse has agreed to acquire Edify Energy. La Cassie has agreed to acquire the equity stake for a total consideration of $1.1 billion, with about a third of the total going on the acquisition and the rest funding two advanced solar and battery projects.
- Akaysha Energy and Snowy Hydro signed a 15-year Virtual Tolling Agreement for Akaysha's 311 MW/1,244 MWh Elaine BESS in Victoria.

Source: AFR, RenewEconomy

Data Centres

We don't claim to have cracked the code on the finances of the AI boom but let's play a little game. Imagine I tell you I've got something to sell. You say, "Sorry, I don't have the money, and I can't buy your product." Normally, I'd just walk away and try my luck elsewhere.

But instead, I say, "Don't worry, I'll give you the money so you can buy my product." At that point, you'd probably laugh and call me a snake eating its own tail.

And yet, when it's OpenAI and NVIDIA playing this game, suddenly it's called "strategic partnership." Funny how circular funding starts looking like innovation once you slap a trillion-dollar market cap on it.

With *that out of our system*, we can focus on electricity markets. Renewable developers also want in on the action and are having a FOMO moment. While they might not be getting personal cheques from Jensen Huang or Sam Altman, they have been able to convince themselves that the future is full of buckets of gold. Artificial Intelligence will spur a new growth in data centre roll out in Australia and their 2035 cheques from previously much promised green hydrogen load will now be replaced by much larger ones from data centres (hopes spring eternal).

As debt investors, our DNA is configured with scepticism. We have a view of the future that is fundamentally not as optimistic as equity investors. Therefore, we have decided to investigate how much substance is in the future electricity demand growth from data centres.

Presently, there are more than 150 data centres in Australia with a combined capacity of more than 1.6 gigawatts (GW). In 2024-25, data centres consumed around 4 terawatt-hours (TWh) of electricity across the NEM, accounting for a mere 2% of grid-delivered supply. But under the latest NEM Electricity Statement of Opportunities, Australian Energy Market Operator (AEMO) predicts that demand from data centres will surge to 21.4 TWh by 2034–35, equivalent to around 9% of grid-supplied electricity. That's the kind of jump that gets a solar farm developer out of bed.

So what is AEMO banking on?

Training large language models?

For context, training GPT-3 consumed approximately 1.3 Gigawatt-hours (GWh) of electricity, while GPT-4 is estimated to have taken over 50 GWh. As models becomes more complex, energy consumption is expected to increase exponentially. But here's the catch, model training is not happening in Australia. Most models are being trained in the US or China. Washington and Beijing won't export model training to Macquarie Park when it underpins national security and global tech dominance.

Prompting and inference?

Most models consume between 0.42 to 1.10 Watt-hour (Wh) per query. Energy consumption increases with prompt length and model architecture. To put this into perspective, a simple Google search consumes approximately 0.30 Wh of electricity. One could say, prompting increases electricity consumption by approximately 40% compared to using a search engine. As a side note, we asked Chat GPT to compare energy consumption of its system relative to the human brain – the answer? For a one second query it estimated that the brain uses 6 joules relative to Chat-GPT requiring 100-1000 joules for the same query.

However, if we use Google as our benchmark and assume six trillion annual searches shift from Google to AI-augmented queries, that's approximately 3 TWh of incremental global demand. All six trillion searches won't happen in Australia. We contribute less than 2% to global GDP and make up less than 0.4% of the global population. Even on a conservative basis, if we estimated that 10% of AI-augmented queries occurred in Australia, that's just 0.3 TWh. On its own, 0.3 TWh won't move the dial in the NEM that consumes 21.4 TWh per year.

The key to supporting AEMO's forecast would lie in scaling inference from models. The number of applications embedding AI in the future will be central to growth in energy consumption. However, inference must happen locally, from hyperscalers in Australia, to drive the 13-fold expansion AEMO is forecasting. The key questions will be how relevant latency, security, and sovereignty risks are for artificial intelligence applications.

Cooling demand from hyperscalers?

One may argue that it is not just prompting and AI. It is a whole digital ecosystem that will be housed in these hyperscalers and for every megawatt of servers, there's another megawatt for cooling, backup, and redundancy. Data centres are power-to-heat conversion machines, and in Australia's climate, cooling loads can rival IT loads.

However, most data centres run well below 100% of rated load. Rated load is based on the worst-case combination of a data centre working at maximum activity and environmental conditions at their hottest (air conditioning at max capacity). In reality, data centres don't always run at maximum capacity, as seen in the table below which highlights the utilisation of NextDC's data centres:

	30 June 2025	30 June 2024	30 June 2023	30 June 2022	30 June 2021
Operating facilities[1]	17	16	12	11	9
Built capacity[2]	207.9MW	165.1MW	133.4MW	113.9MW	95.8MW
Contracted utilisation[3]	244.8MW	172.6MW	122.2MW	83.0MW	75.5MW
% of built capacity	118%	105%	92%	73%	79%
Billing utilisation[4]	110.9MW	86.0MW	77.7MW	72.8MW	65.4MW
% of built capacity	53%	52%	58%	64%	68%

While we may see an influx of gigawatts of new data centres, on average it will operate well below nameplate capacity.

As investors in energy markets, we would love to see growth in electricity demand, but we would rather see the cobra itself rather than just hear the music from the snake charmer.

Percentage of perfect

The battery revenue stack consists of energy arbitrage and frequency control ancillary services (FCAS) revenue. Unlike wind and solar projects, which largely generate depending on whether the sun is shining or the wind is blowing, batteries are fully dispatchable. Batteries actively decide when to charge and discharge to capture arbitrage opportunities and participate in the eight FCAS markets. Given the dynamic nature of the electricity market – with supply and demand constantly fluctuating with weather, plant availability and transmission constraints – the optimal strategy for battery dispatch can change from one five-minute trading interval to the next.

This introduces significant operational complexity. Batteries must continuously reforecast the price outlook to identify optimal market participation. In practice, these decisions are typically managed by autonomous bidding optimiser software, which dynamically evaluates market conditions to maximise revenues across arbitrage and FCAS services and automatically generates market bids. For developers and asset owners, optimiser performance plays a key role in realising target returns from their batteries.

While everyone in the battery industry agrees that benchmarking battery performance is essential for evaluating software providers, there is still no single standard for assessing optimiser performance. Benchmarking battery performance is complex due to the range of industry methodologies. Simple revenue comparisons alone cannot capture project-specific factors such as battery duration (one-hour vs two-hour), site constraints, plant availability, contractual terms, or off-market incentives.

One of the methodologies that is commonly used to benchmark the optimiser performance is via a Percentage of Perfect (PoP) method. This approach involves back testing the battery's performance within historical market conditions on a perfect foresight basis. In other words, if we knew the electricity and FCAS prices beforehand, how would we trade the battery in terms of charging, discharging and participating in FCAS markets. This gives us the maximum revenue the battery could have earnt over a given period, and then comparing it to the actual revenue earnt during the period. Formulaically, percentage of perfect can be written as:

$$\textit{Percentage of Perfect} = \frac{Actual\ revenue\ earnt}{Maximum\ revenue\ opportunity\ on\ a\ perfect\ foresight\ basis}$$

While, PoP provides a method of benchmarking optimiser performance, it comes with a few limitations. This approach assumes that the battery's activities have no impact on market prices – it is a price taker and can dispatch all of its capacity at historically observed prices. This assumption falls short of reality as bidding behaviour will influence prices. This is particularly the case for larger batteries or even for smaller batteries where they are collectively controlled by a single optimiser that controls a large amount of capacity.   This is important at extreme price events – e.g. when electricity prices are close or at the market price ceiling of $20,300/MWh. At these times, by definition, there is very limited supply, and the actions of a single party can often have a material impact on prices.

For example, consider a scenario where peak demand and prices were expected to occur at 7pm, followed by a sharp fall in prices at 8pm when night-time wind generation is expected to arrive. Considering the forecast, all batteries in the market dispatch their available capacity at 7pm to capture the peak prices. However, let's assume that the wind was slow to arrive and therefore resulted in a surprise shortfall of supply at 8pm. At that point, all batteries have discharged and have limited opportunity to respond to the shortfall and prices hit the market cap of $20,300/MWh. Under the PoP methodology, batteries should have foreseen the supply shortage at 8pm and withheld capacity at 7pm in order to capture the price cap at 8 pm. Yet in practice, if a significant number of batteries had done so, the shortage at 8pm would not have occurred. There would have been supply available to fill the gap left by wind generation and prices would not have reached the cap.

Another limitation of the PoP benchmark is that it can only be applied to merchant batteries. Batteries that have some form of contracting for providing network support or a part-tolling arrangement are constrained by obligations under the arrangement. Such batteries will not follow a 100% revenue maximising strategy. For example, the Victorian Big Battery and the Waratah Super Battery have contractual obligations with AEMO under the System Integrity Protection System (SIPS) protocol to ensure minimum availability of the battery at certain times of the year. Given the contractual requirements, it is hard to benchmark the battery on a pure PoP basis.

Similarly, for a hybrid solar and battery project, the calculation of PoP is even more complicated and may not provide a basis for benchmarking across different battery projects. A hybrid solar farm charges the battery from the solar panels, not from the grid. The decision tree for a hybrid solar farm has a few more branches as the project actively decides between the following options to maximise revenue:

- Charge the battery from the solar farm
- Discharge excess solar generation to the grid
- Discharge the battery to the grid
- Curtail (turn off) the solar farm and not dispatch any generation to the grid (eg if market prices are negative and the battery is full)

While theoretically, one can predict what the maximum revenue is, back-casting a hybrid is quite complex as each project comes with its own nuances, and you need to know what potential solar generation was (e.g. generation before economic curtailment for negative prices). Curtailment due to thermal constraints and negative pricing are different across projects which make benchmarking solely on the basis of percentage of perfect unreliable.

Despite its limitations, participants continue to use PoP for benchmarking battery performance. Typically, proponents of battery projects have assumed that the PoP for a project will be close to 80-90%. This plays a key role in their expectations of future revenue outcomes as revenue forecasts are calculated on the following basis:

Forecast Revenue = $Market\ Revenue \times Percentage\ of\ Perfect$

While there are no publicly available ratings for optimisers operating within the NEM, analysis of a sample of optimisers has revealed that actual observed PoP for optimisers have been more in the 60-80% range. There is significant variability between the PoP performance for individual optimisers. Some optimisers have been performing far better than others.

So, what does this mean for the future?

If an optimiser is chronically underperforming PoP expectations relative to its peers, battery project proponents are highly likely to switch their optimisers to better performing optimisers. We wouldn't be surprised that the dynamics of funds management industry start to emerge in battery optimiser markets - where there is constant switching from underperforming managers (optimisers) to outperforming managers (optimisers).

The job of an optimiser is about to get harder as batteries become a dominant pillar of the generation fleet in the NEM. Currently, on average batteries make less than 2-3% of the total evening peak supply and primarily compete with coal and gas power plants to be dispatched. It is easier to optimise when the competition has a reasonably predictable cost of supply and, hence, bidding behaviour (fuel costs determine how coal and gas bid). However, this dynamic will change in a battery dominated world, where the competition shifts from a human trader responsible for dispatching coal/gas power plant to another algorithm optimising a battery. This is where we believe electricity markets cross over to high-frequency trading. Optimisers will need to consider bids from other batteries and predict bidding behaviour, similar to order flow predictions. The real alpha for an optimiser might not just be optimising for peak prices but predicting optimisation errors by other optimisers and front running them (algorithms competing against algorithms). Will this have a further impact on the PoP? Only time will tell.

Lastly, if the current levels of PoP in the 60-70% range are consistently observed in the future, it would be very hard to justify the 80-90% POP assumption that underpins many long-term financial model forecasts. Revising the PoP down, ceteris paribus, would be a material write down of revenues compared to expectations which will disappoint long-term infrastructure investors. Active management and proper benchmarking of the optimisers will be key to realising full value of battery projects.

REZs the Pig in the Renewable Snake

Public reporting of sentiment in the renewables sector and the progress of the energy transition often seems schizophrenic, swinging from unbridled optimism to dire pessimism from one week to the next. Investors in the sector are best minded to think long-term and to recognise that in a sector with 20-50-year asset lives change happens slowly. Thus, while the headlines surrounding the CER reporting in August that no wind farms and only 615MW of solar farms reached financial close in the June quarter of this year, are factually correct, they probably miss the bigger picture.

For the National Electricity Market (NEM), which covers the eastern states of Australia plus South Australia, the action is in the Renewable Energy Zones (REZ).

What is a REZ? A REZ is an area that has been designated by governments as an attractive area – from both a resource availability and grid perspective – for the development of renewable energy projects. Within REZs there is an effort to coordinate environmental and development approvals, grid connection and transmission upgrade arrangements to provide for a coordinated development of large amounts of additional renewable energy. There are plenty of criticisms about how coordinated this really is – but let's cut policy makers some slack and say that they are learning as they go and, hopefully, future REZs will be better.

There are two first REZs that are an important template for how this is likely to operate – the Central West Orana (CWO) REZ (located around Dubbo) and the South West REZ (located on the Hay plain in NSW along the NSW/Vic border). In Q2 the NSW government announced the access right winners for both of these REZs. For CWO there are 10 projects with 3.0GW of wind, 2.5GW of solar and 1.7GW of storage. For the South West REZ, there are four projects with a further 3.2 GW of wind and 0.3GW of solar.

The vast majority of these projects are likely to start construction in the next year (and, if they don't, this will be a huge warning sign that the energy transition is running seriously off track) and start commercial operations in 2028 – 2030. Across these two REZs this is a huge amount of capacity – 6GW of wind and 3GW of solar. Once fully operational, these projects are likely to deliver approximately 25 terawatt hours (TWh) of generation (that is millions of MWh). To put this in context, the Eraring coal fired power station generated 15.5 TWh in calendar 2024. Thus, the projects for these two REZs would comfortably replace – with a lot left over – the generation lost from the closure of Eraring (which is slated to occur in 2028). In fact, the CWO and SW REZ projects are probably enough to cover Eraring and Vales Point.

There are risks that not all of these projects will reach financial close quickly (the Yanco Delta project in particular seems to be quite slow). However, in the grand scheme of things, once these projects reach financial close, a huge chunk of wind and solar is going to drop into the market in three or so years later.

This is the pig passing through the snake.

This is the good news.

The bad news is that no-one really controls the timeline of delivering the REZs. There are lots of people who can screw it up but there isn't anyone who, on their own, can make it happen. For example:

- Individual project developers need to reach NTP for their projects and start construction. But to achieve this they need approvals, offtakes, construction contractors and equity and debt investors. The biggest question mark here is whether there are enough equity investors with enough long-term confidence in the Australian energy market to fund these projects (or put another way, can the projects get sufficient offtakes to provide that confidence)?
- Local, State and Federal government have separate approval rights over each of the projects and the network upgrade works for each of the projects. While many of these are in place, not all are, and this is a further source of delays. While Chris Bowen can agitate within the Federal Government to fast track EPBC approvals, he has no direct influence over state or local governments.
- Particularly for CWO, there are substantial network upgrades that will connect the projects on a combined basis, to the broader transmission grid. It is quite possible for the underlying projects to be complete, but for a delay in the network upgrades to delay operation. Within this, there is further complexity. The CWO projects will be connected to the grid by the ACEREZ consortium (Acciona, Cobra and Endeavor Energy) which in turn connects to the Transgrid transmission network. Thus, a delay by either of them (or their underlying contractors) or a delay in getting approvals from EnergyCo and/or the AER (given that they are effectively approving the costs that will be passed on to all NSW electricity users for the cost of the REZ upgrades) could delay the project.
- Commissioning will be particularly tricky. AEMO is trying to coordinate this so that each REZ effectively joins the network as a single large project. However, how this actually works is untested. Given the potential costs of delays and how these delays can cascade from one project to another, this has the potential to bevexatious. Infradebt has witnessed the unique challenges of two projects trying to connect to the network nearby each other. For CWO, 10 projects are going to be connected at once. Given the liquidated damages sums involved with construction contractors and PPA offtakers, this is a recipe for a lawyers picnic.

Thus, while Chris Bowen will be sweating on getting the CWO and SW REZs operational prior to 2030 (as his chances of hitting his 2030 targets in the absence of these projects being operational are zero), he doesn't actually have much direct control.

What are the implications of this:

- First, there aren't going to be big additions of new wind supply to the NEM for the next two or so years. There are a small number of large wind projects currently under construction (Golden Plains 2, Macintyre and Clarke Creek.) but after that, not much supply is going to hit the market until these REZs come through. Our prediction would be the SW REZ projects will actually beat CWO to operation.
- The secondary implication of this is that base load electricity prices, in the absence of a surprise major outage, are likely to be reasonably steady. There will be a gap between wind dispatch weighted prices and solar dispatch weighted prices, with the latter expected to continue to be weak. As a generalisation, solar construction is front-running wind (in both time and capex cost terms) and this is reflected in prices.
- Thirdly, our expectation is that Eraring will remain open until these two REZs are operational and this is likely to require an extension beyond the current proposed 2028 closure date. While this is disappointing for emissions and the planet, there are two good reasons for this. Politically, neither the NSW nor Federal government will want risks of supply shortages until they are sure the generation from the REZs is there to replace Eraring. Economically, Origin is making reasonable profits from operating Eraring and, hence, has a strong incentive to keep it open. The main thing that would change this is lower night-time electricity prices, which isn't going to happen until a lot more wind enters the market. That is, once the SW and CWO wind projects come online.