

Electricity Wholesale Update

September 2023

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What we'll cover:

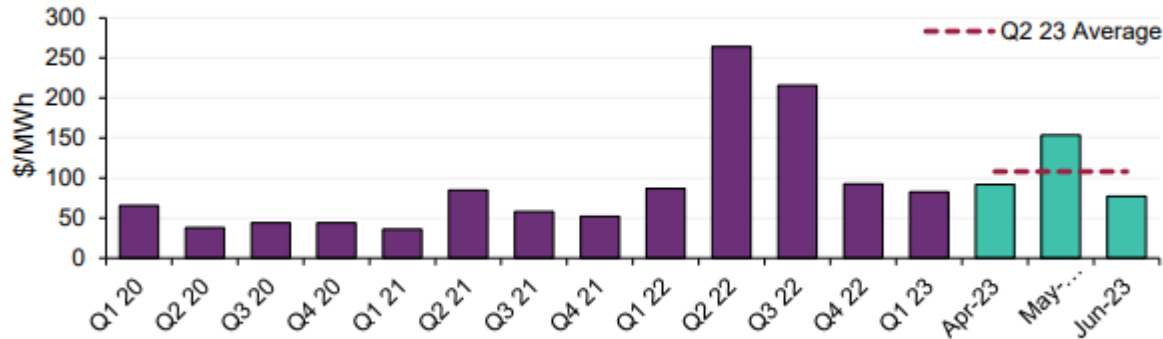
- Q2 -2023 Spot Summary
- Forward Curve
- Market Drivers
- Questions

Q2-23 Spot Summary

- Wholesale electricity prices were down considerably on Q2-2022 but still high in historical terms – so what happened?

Figure 9 Average NEM spot prices down 59% on Q2 2022, but remained the second-highest Q2 level recorded

NEM average wholesale electricity prices – quarterly since Q1 2020



Q2-23 Spot Summary

- April 2023 saw the retirement of AGL's Lidell Power Station
- Despite this, black coal-fired generation availability was higher in Q2-23, due to lower planned and unplanned outages

Figure 27 Lowest Q2 black coal-fired generation output on record

Quarterly average black coal-fired generation – Q2s

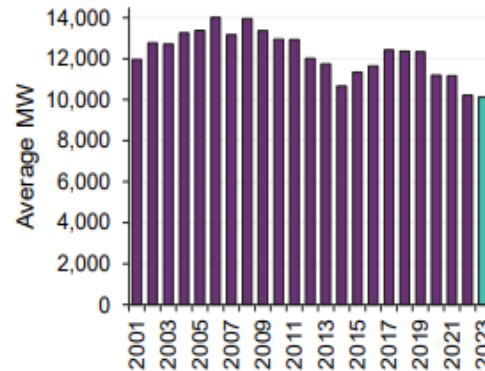
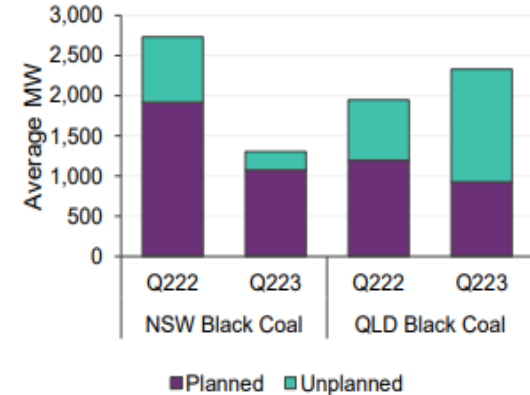


Figure 28 Coal-fired capacity on outage declined, driven by New South Wales

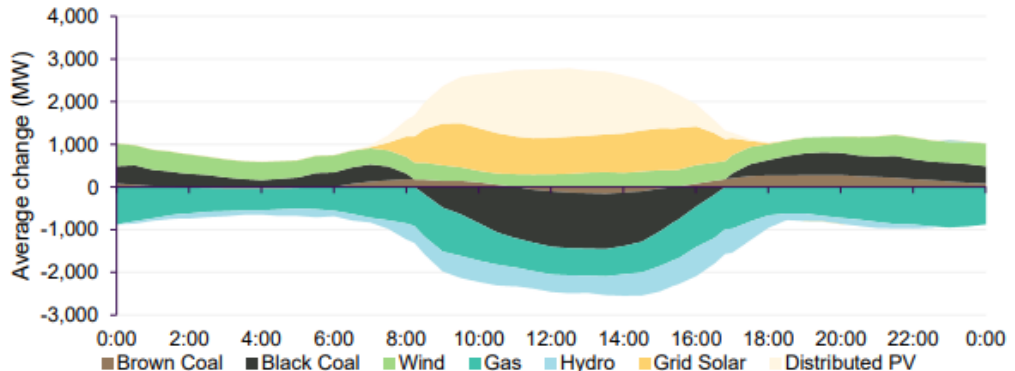
Average coal-fired capacity on outages – Q2 22 vs Q2 23



Q2-23 Spot Summary

- Operational demand was the second lowest Q2 average since 2005
- With lower operational demand and high levels of renewables, black coal-fired generation was the lowest since 2011

Figure 26 Large daytime drops in gas, hydro and black coal generation as VRE output increased
NEM generation changes by time of day – Q2 2023 vs Q2 2022

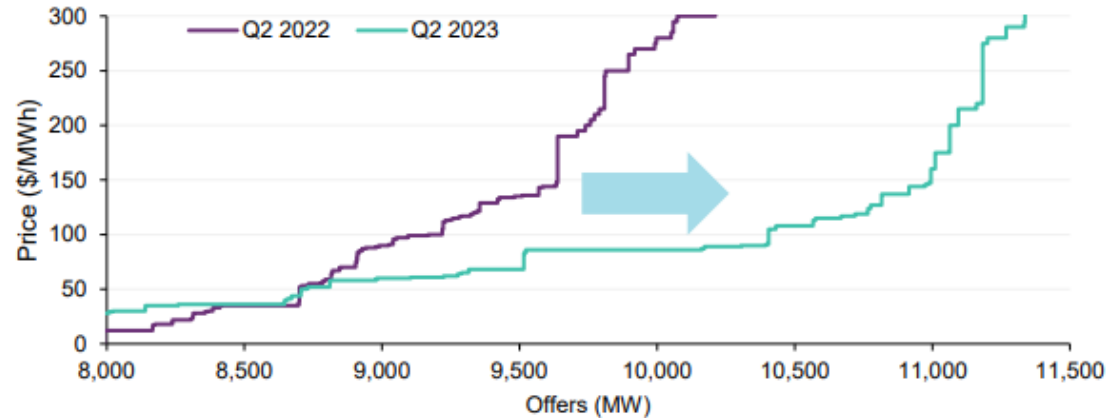


Q2-23 Spot Summary

- With fewer fuel supply restrictions and higher availability, coal generators offered more volume at lower price bands
- The black coal price caps (\$125/T) are to finish at end of FY24

Figure 13 Increased black coal offer volumes at most price levels

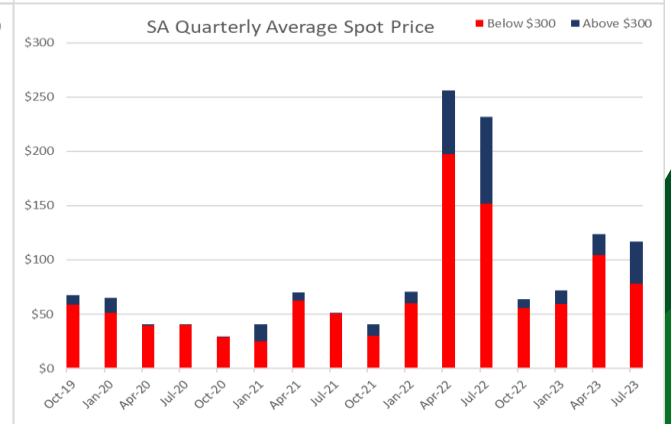
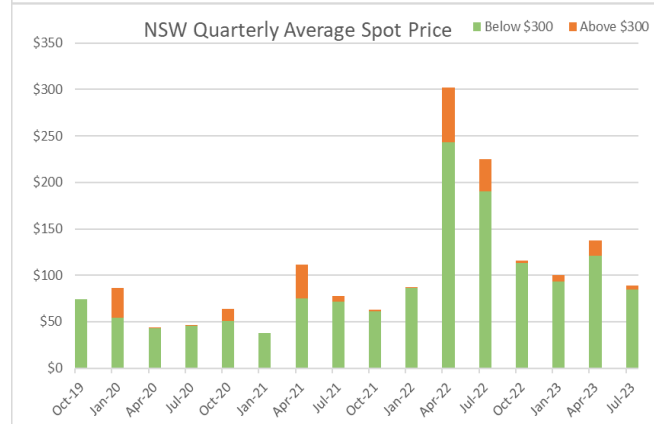
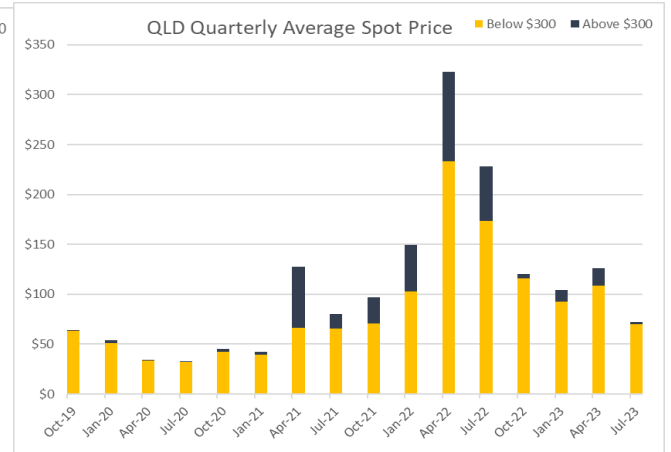
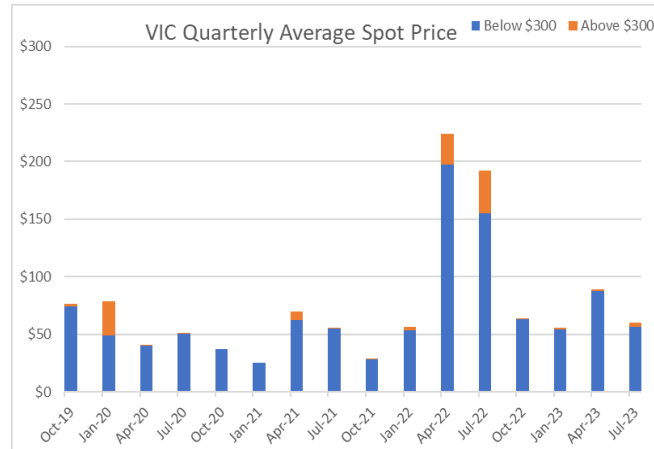
Black coal generation bid supply curve – Q2 2022 and Q2 2023



Q2-23 Spot Summary

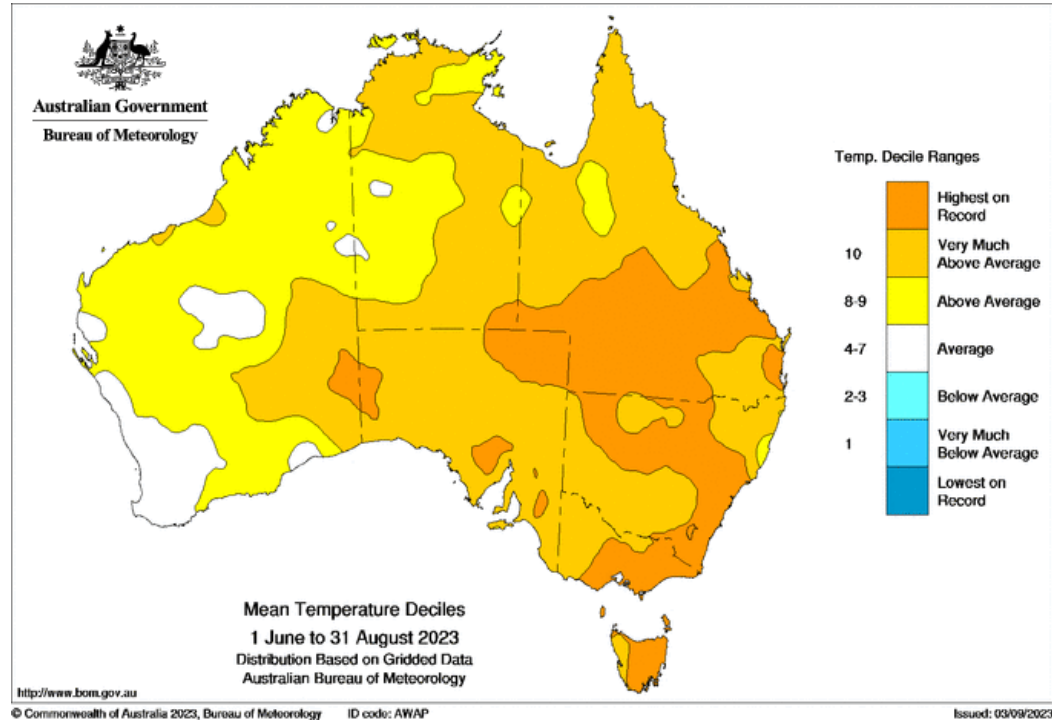
Other factors that impacted spot price outcomes included:

- High gas storage levels at Iona
- Mild April, cool May and warm June
- SA volatility on low wind days



Q2-23 Spot Summary

This graph shows that this winter has been quite warm across the whole NEM, and that the grid hasn't really been tested since Liddells departure in April



Forward Market Prices - 2024

2024 CAL F SWAP & CAP



Node
 NSW
 QLD
 SA
 VIC

Contract Year
2024

Period
CAL

Carbon
[All]

Date
01/07/2021 07/09/2023

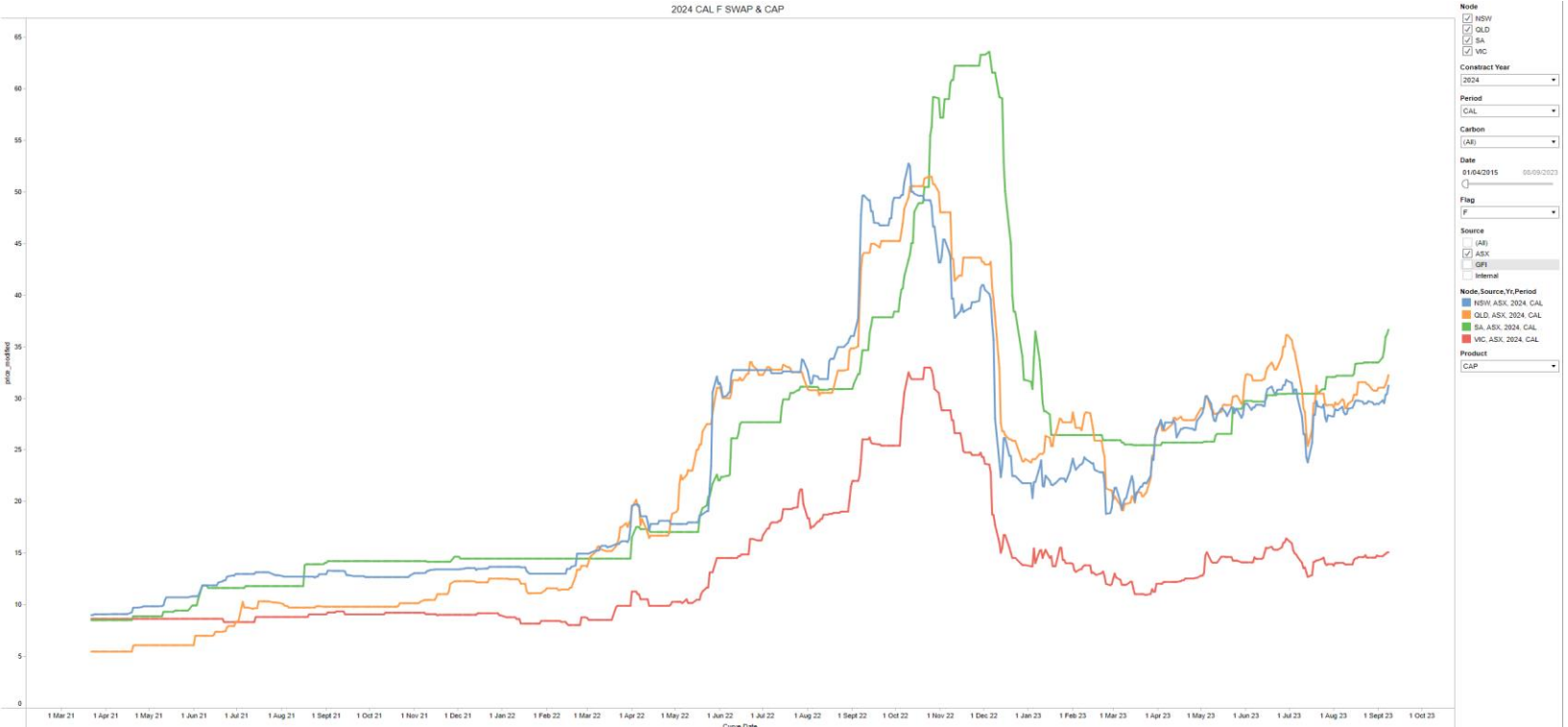
Flag
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Source
 (All)
 ASX
 GFI
 Internal

Node, Source, Yr, Period
■ NSW, ASX, 2024, CAL
■ QLD, ASX, 2024, CAL
■ SA, ASX, 2024, CAL
■ VIC, ASX, 2024, CAL

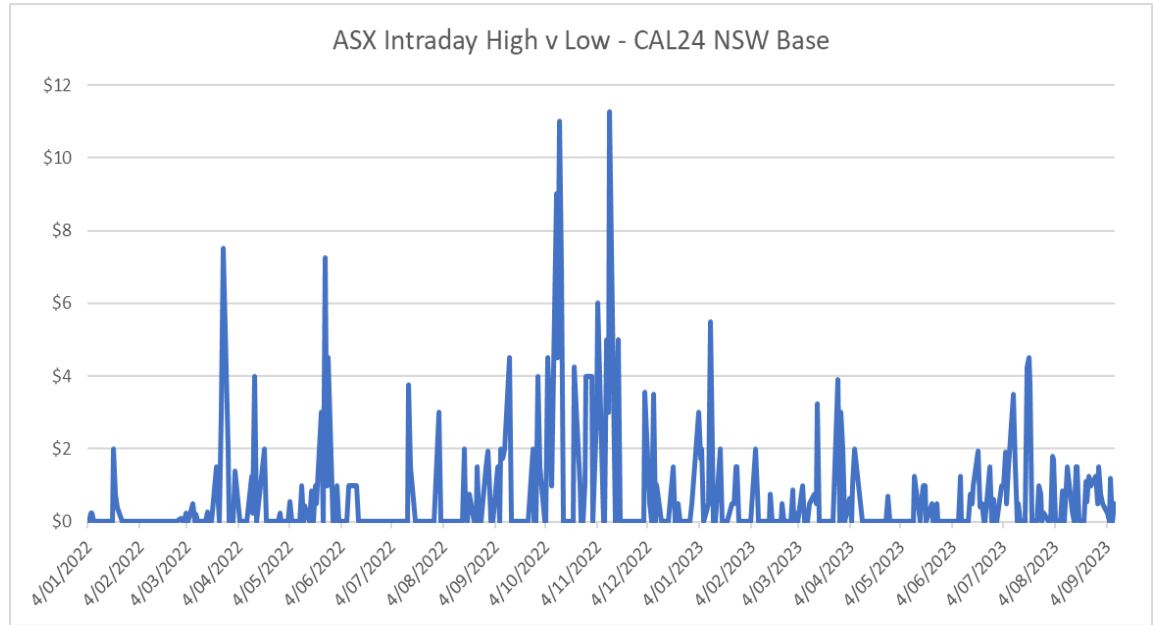
Product
SWAP

Forward Market Prices - 2024



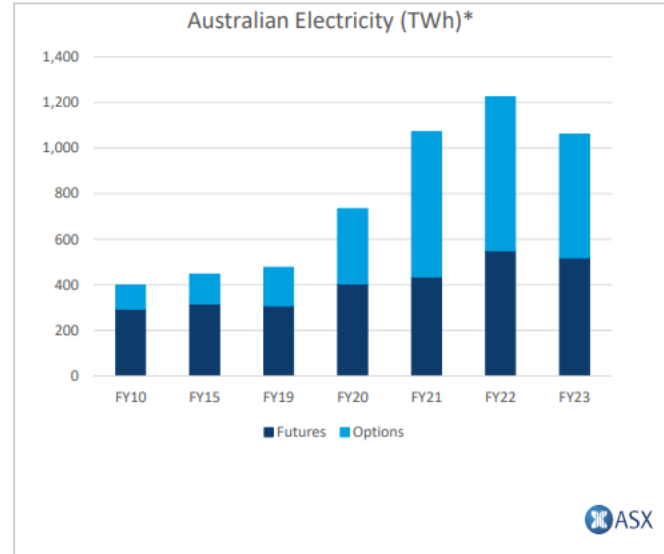
Forward Market Prices - 2024

- Forward market remains volatile, with a noticeable lack of natural (generator) selling in NSW in particular
- Daily volatility makes it hard for participants to buy or sell futures contracts as baseload generation leaves the market



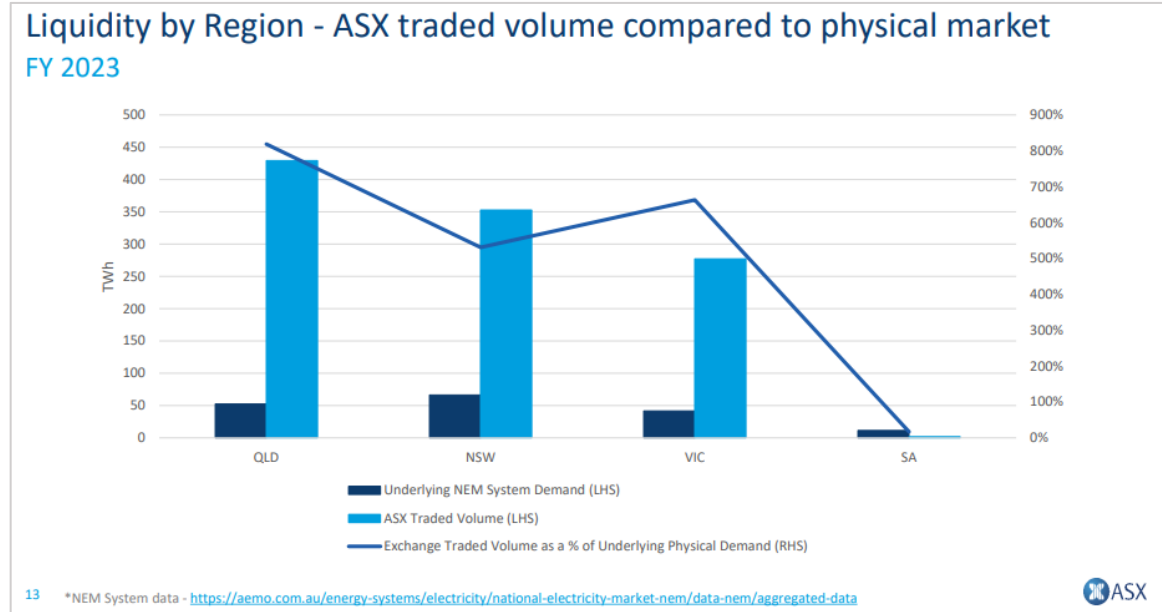
Forward Market Prices - 2024

- Traded volume on the ASX for FY23 is down in comparison to FY22 with options still making up approximately 50% of traded volume



Forward Market Prices - 2024

- QLD still has the greatest amount of liquidity, followed by NSW, VIC and SA



Market Drivers

Review recommends NSW government delay closure of Eraring power station

Hot El Niño summer brings 'elevated' risk of power blackouts to eastern Australia, operator warns

NSW renewable energy zones up to two years behind schedule

Queensland to legislate renewable targets in \$62 billion wind, solar and storage plan

A \$1.7b cost blowout for Marinus Link revealed, but what will Tasmanians end up paying for power?

Vic farmers take to Melbourne with tractors to protest transmission lines

"Cheaper, cleaner power:" Consultation opens for new Victoria offshore wind zone

Bowen confirms \$12bn Snowy 2.0 cost blowout, says pitfalls should have been known

Questions?



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Materials:

AEMO's QED Q2-23 Report

ASX Australian Electricity Overview FY23



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