

NEM Market Transition

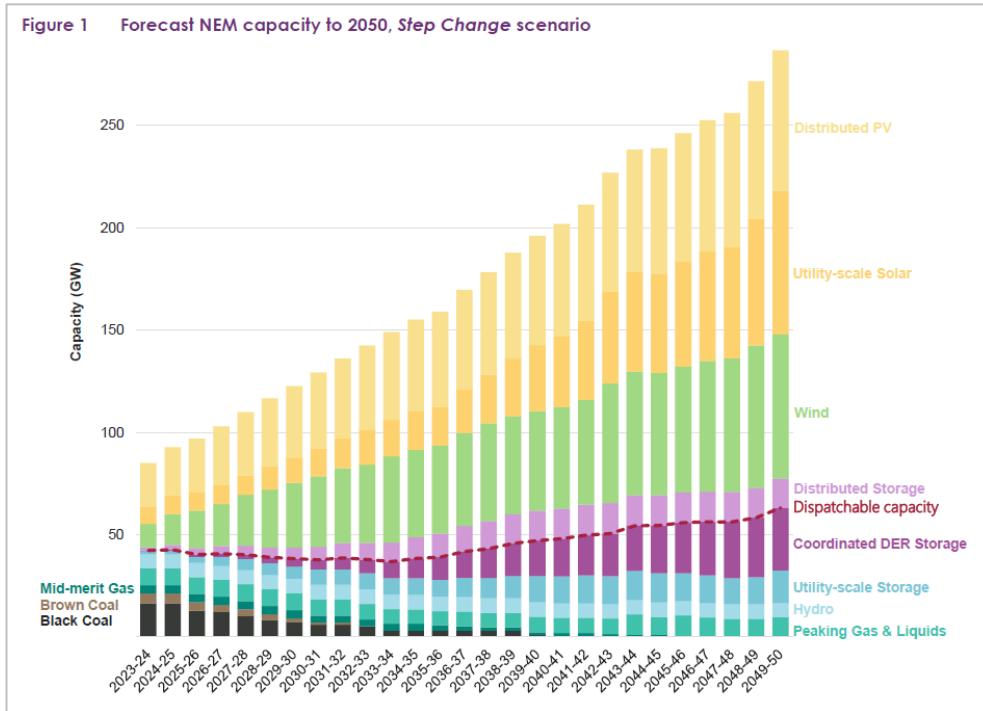
Ross Edwards

October 2022



EnergyAustralia
LIGHT THE WAY

The AEMO Step Change Scenario is becoming self fulfilling



Source: AEMO Integrated System Plan

Key Themes

- 1.8^o emissions reduction trajectory
- Early coal retirements
- X% renewables by 2030
- Reliance on variable renewables and limited duration storage to maintain supply/reliability
- Dependent on extensive transmission build

Unexpected government interventions are accelerating change and uncertainty

“Time to shine:” Queensland plans “supergrid” and world’s biggest pumped hydro
Renew Economy 28 Sep



Queensland to phase out coal by 2035

The state will all-but phase out coal-fired power by 2035, in a dramatic reshaping of the state’s energy mix to hit an ambitious new renewables target of 80 per cent by 2035.

The Australian 28 Sep



Victorian power play ‘undermines’ national market

Australia’s big electricity players face a new state-owned entrant in the market competing for generation deals and retail customers

The Australian 20 Oct

Victoria fast-tracks coal exit with target for 95 pct renewables by 2035
Renew Economy 20 Oct

Deal signed to fund Marinus Link power cable between Tasmania and Victoria

ABC 19 Oct

By Adam Holmes

Posted Wed 19 Oct 2022 at 11:46am, updated Wed 19 Oct 2022 at 6:19pm



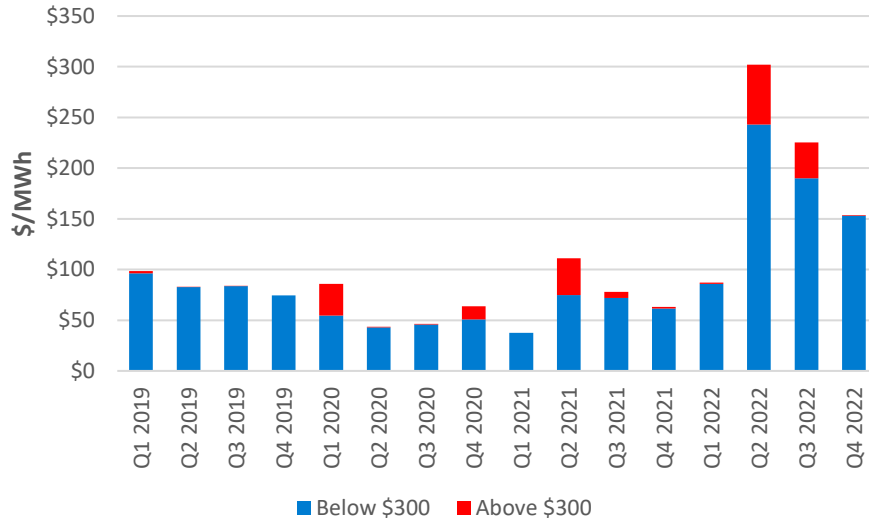
Victoria promises Australia’s biggest renewable energy storage targets
Sydney Morning Herald 27 Sep

Government intervention in energy market goes next-level in Victoria

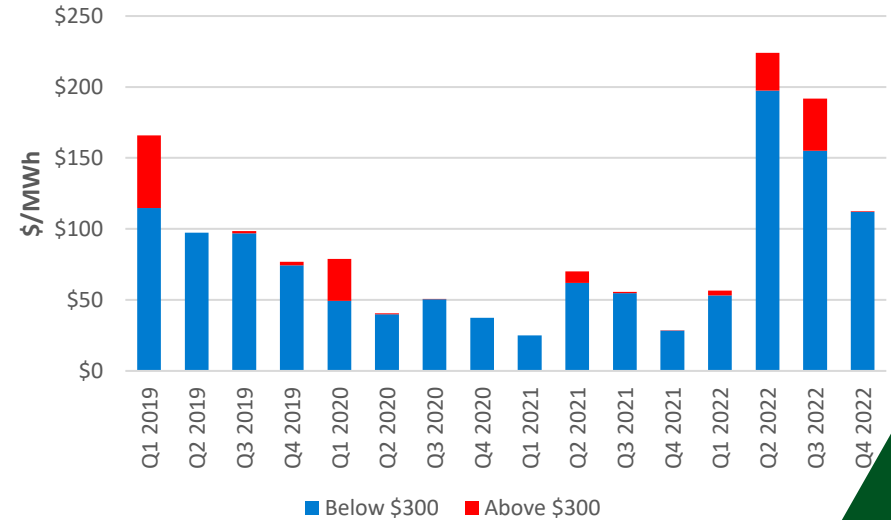
Australian Financial Review 20 Oct

2022 energy crisis driven by coal supply issues and extreme global coal and gas prices

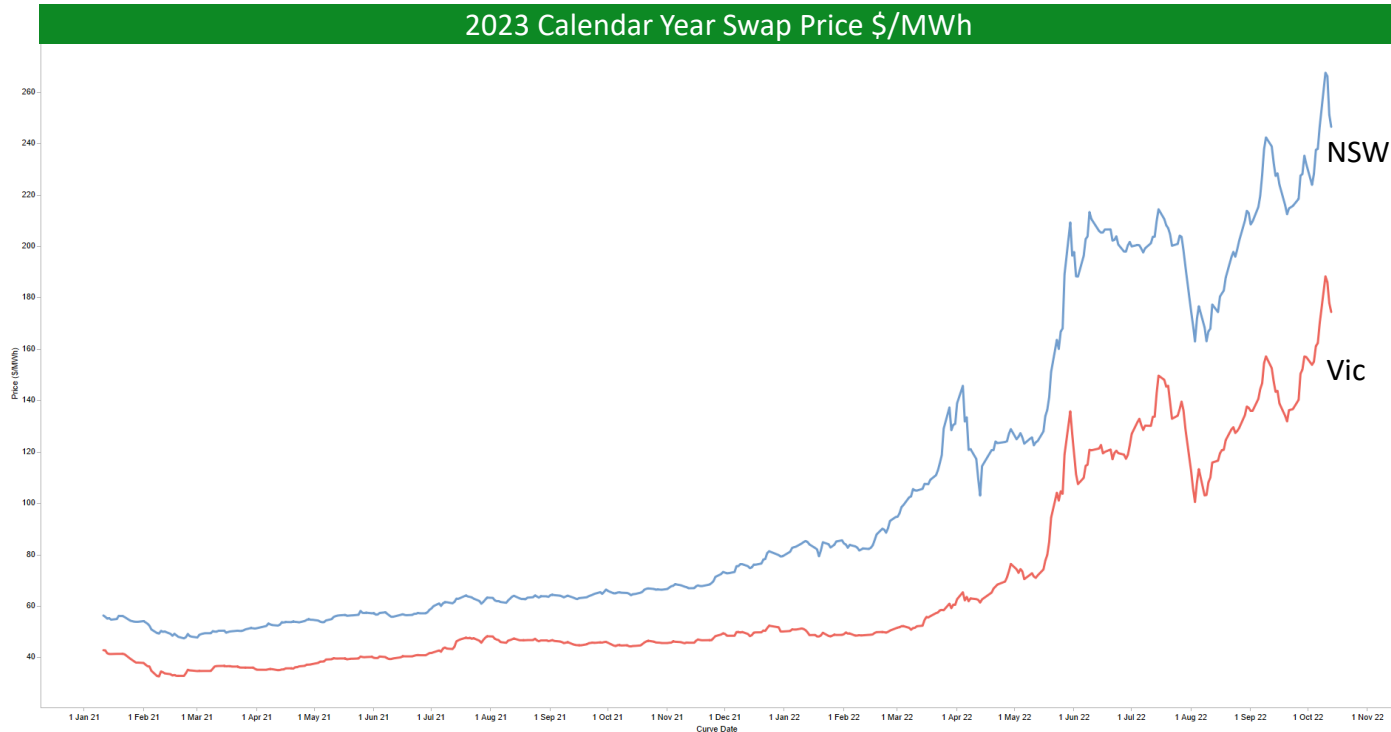
NSW Quarterly Spot Prices



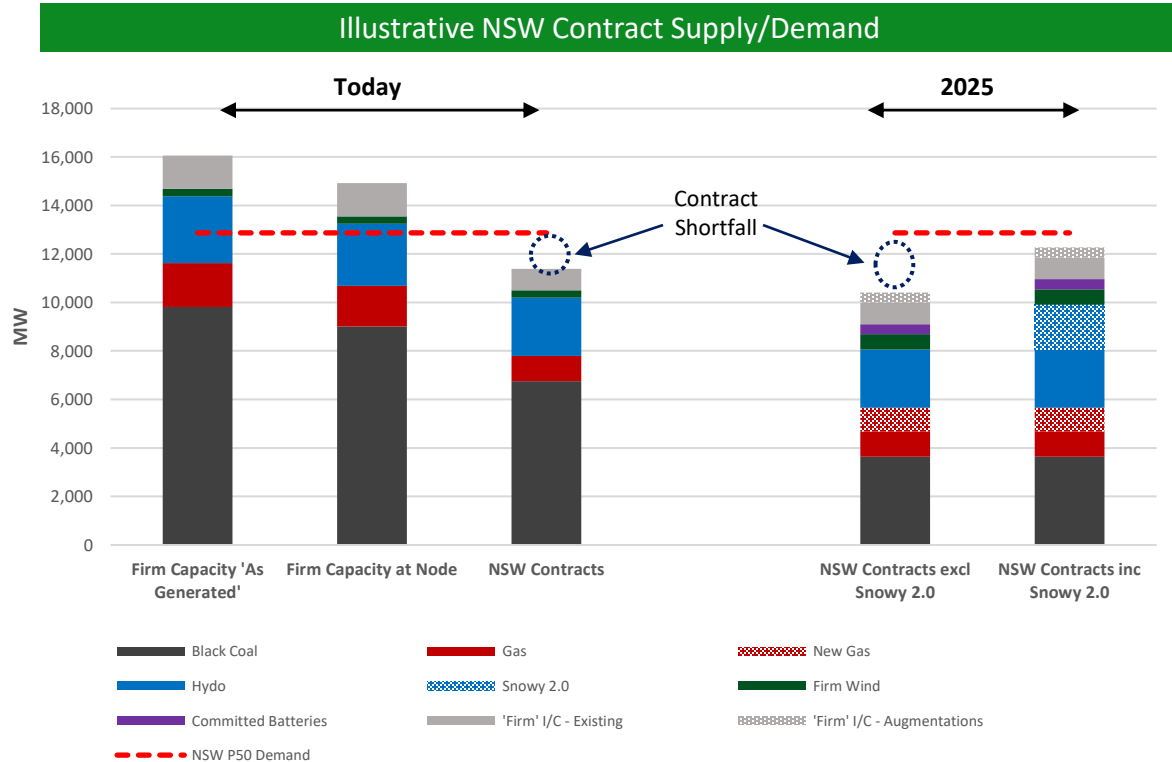
Vic Quarterly Spot Prices



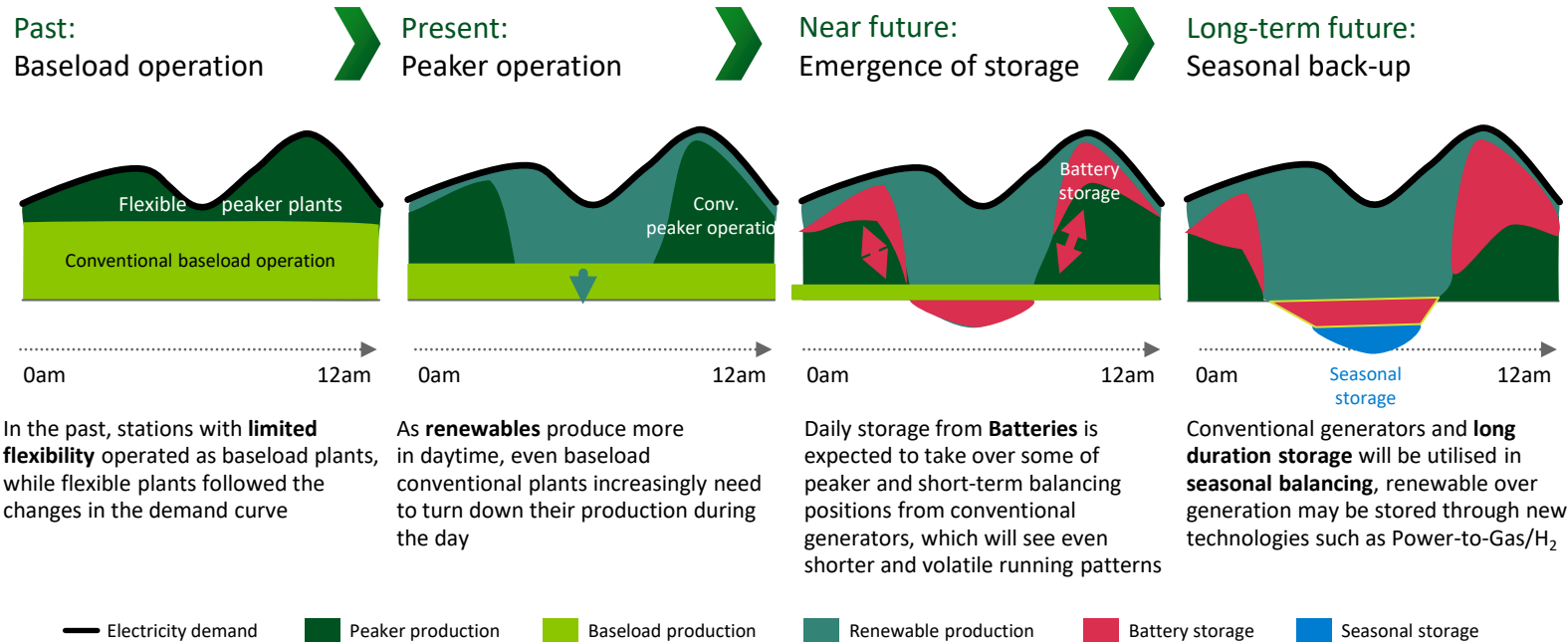
2022 energy crisis signals commencement of disorderly market transition



As coal retires, there is likely to be a shortage of hedge contracts for retailers and customers



As coal plant retires, the market increasingly needs flexible generation that can provide 'Shape'



What does this mean for C&I customers?

1

Traditional fixed price energy contracts may become unavailable as coal generation exits and contract scarcity bites – more innovative risk sharing approach required

2

Renewables may appear attractive given extremely high electricity prices, however renewables by themselves are not enough to secure ongoing supply

3

Renewable firming is likely to be challenging to secure as coal generation is replaced by limited duration storage. C&I customers may need to help underwrite new storage and flexible capacity projects to give them supply security,

4

Demand response and load flexibility will be very valuable and can drive down energy procurement costs

Recent commitments from EnergyAustralia to deliver our future portfolio

Tallawarra B Gas & Hydrogen Capable



- Australia's first net zero emissions hydrogen and gas capable power plant
- 316MW of dispatchable, flexible capacity for EnergyAustralia's portfolio in a market where we are structurally short
- Secured \$83m in Government funding to ensure an economic outcome for EnergyAustralia ahead of NSW Roadmap
- Accelerates EnergyAustralia's hydrogen capability
- The turbine foundation floor has been laid with the 372 tonne gas turbine arriving in May

Kidston Pumped Hydro



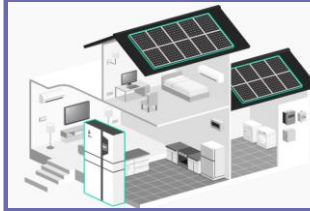
- 250MW (~2000MWh) of dispatchable, flexible capacity under contract for EnergyAustralia's portfolio in a key growth market for EnergyAustralia
- The type of asset that is very hard to replicate
- EnergyAustralia has the market control of the facility under a 10+10+10 option structure, plus an equity option, and no delivery risk
- Significant Government support to make it economic
- Construction on schedule and scheduled to be operational in the market by the start of 2025

Wooreen Battery Storage



- EnergyAustralia has committed to a 350MW/1,400MWh battery at the Jeeralang site
- At a 4 hour duration, this project will be unique to the Australian market, and will be highly complementary to our mass market load
- We are currently working through planning and development activities, with targeted commercial operations in late 2025.

Solar Home Bundle



- EnergyAustralia pays for Rooftop Solar and Battery system installed at customer's home and controls Solar and Battery to match customer load as closely as possible
- Customer receives a ~6kW solar system and a 10.1kWh battery with a fixed rate for 7 years
- EnergyAustralia supplies grid energy to fulfil remaining customer load and the customer pays fixed usage rate for energy consumed
- Targeting 1,000 installations by the end of 2022

Riverina Battery Storage



- EnergyAustralia has committed to a 90MW/180MWh battery project
- The battery project is comprised of two co-located projects – Riverina (65MW/130MWh) and Darlington Point (25MW/50MWh)
- Project has now achieved financial close, and construction expected to be completed by the end of 2023.