

The impact of Eraring closure

Modelling outcomes for the electricity market
under Eraring closure date scenarios

2nd July 2024





Overview of engagement

Endgame Economics (Endgame) was engaged by the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to model the impact in the electricity market of extending Eraring Power Station's retirement date to inform discussions with Origin Energy. Of particular importance were the outcomes for wholesale electricity prices and carbon emissions in the years an extension to the retirement date is being considered.

This presentation covers two Eraring closure scenarios:

- > Eraring closes on its announced retirement date in August 2025.
- > All 4 units of Eraring are extended for three years.

A range of future outlooks were modelled to capture a wide range of electricity market outcomes to inform the Department in their discussions with Origin Energy. These outlooks were run against multiple weather reference years and demand forecasts.

Note the forecasts are based on scenarios which were developed without consideration of the agreement between NSW Government and Origin. This agreement is for Eraring to operate until August 2027, whereas the forecasts assume it operates until late 2028. The forecasts also assume Origin bids Eraring's capacity in line with its historical behaviour, and does not consider the incentives under the agreement to reduce output if Origin opts-in to the underwriting arrangement.

3 possible future worlds have been simulated



Low Cost



Base Case



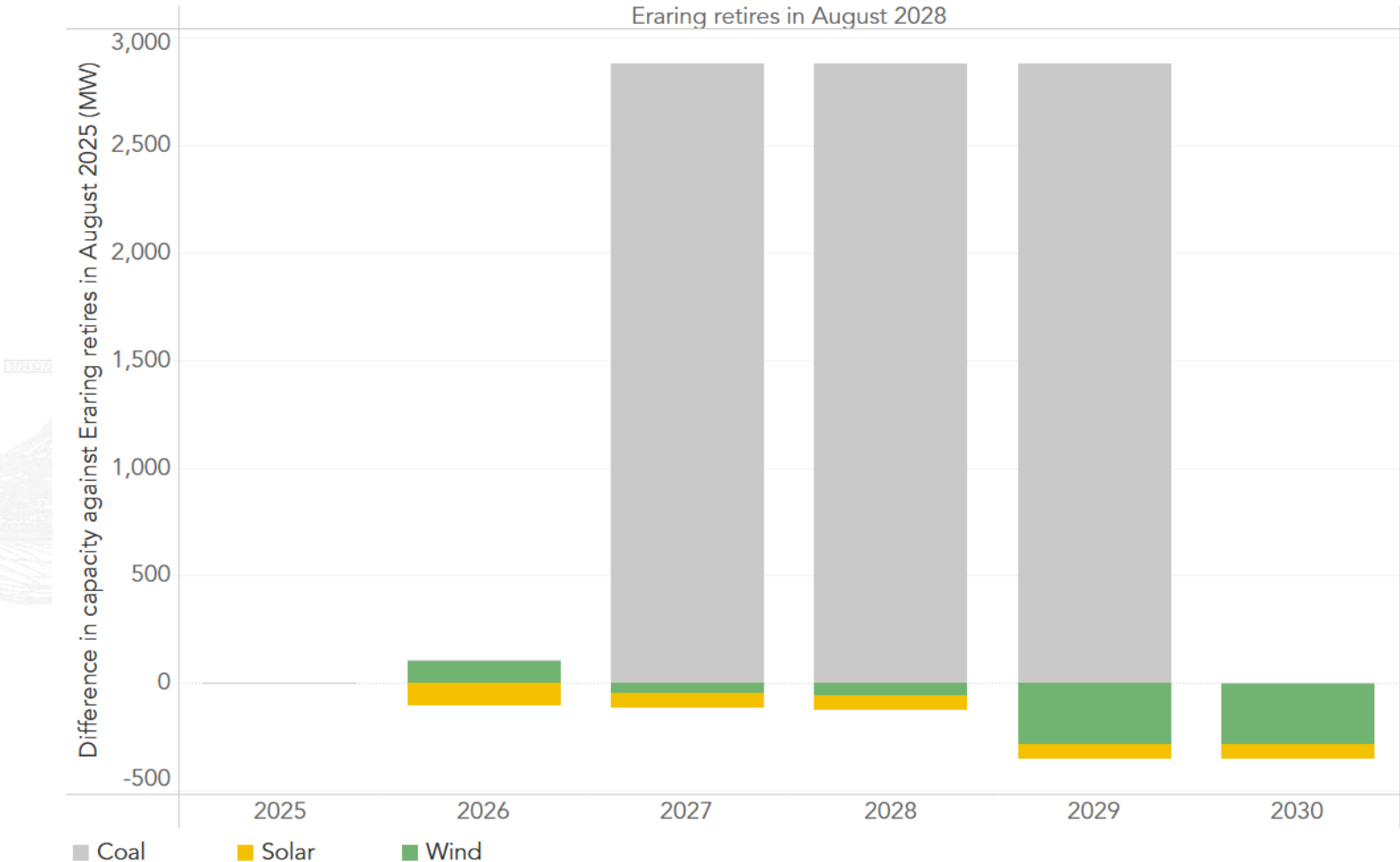
High Cost

Demand	+ 250 MW in SNW	ESOO 2023 Central	- 250 MW in SNW
Project timing	Delay of 6 months	Adjusted Oct 2023 Gen Info	Adjusted Oct 2023 Gen Info
Transmission Augmentation	Delay of 12 months to PEC, HTP, HCC	ESOO 2023 Central	ESOO 2023 Central
Fuel prices	Lower coal prices	NEWC coal futures derated for energy content	NEWC coal futures
NSW wind build limit	250 MW in FY 2026 and 1 GW in FY2027	250 MW in FY 2026	1250 MW in FY 2026
NEM wind + solar build limit	2.5 GW per year	3 GW per year	3.5 GW per year

Delaying Eraring's closure has minimal impact on investment



Difference in NEM capacity between Eraring retires in August 2028 against Eraring retires in August 2025



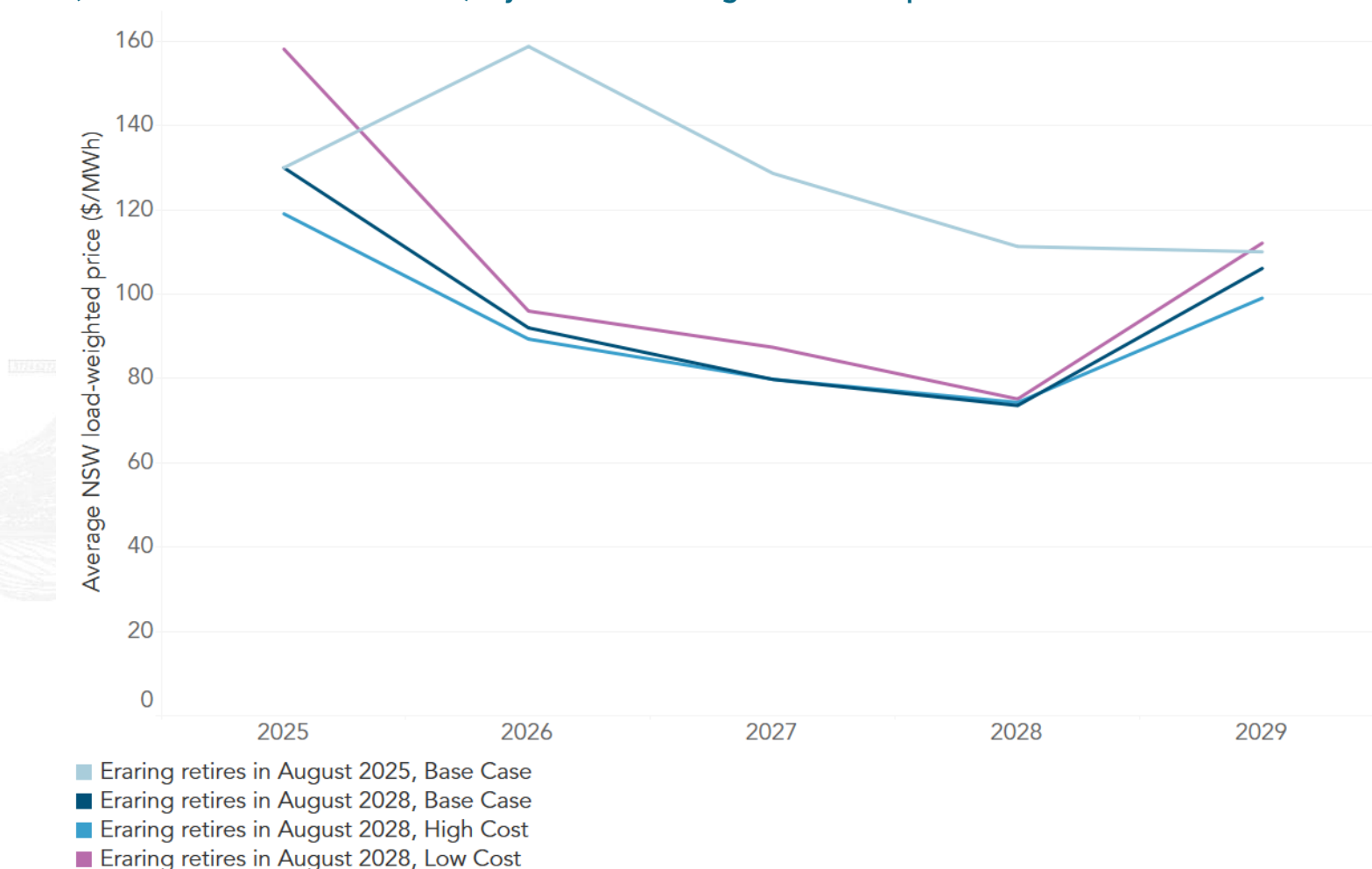
- Our modelling assumes state targets are met and are on time. This a major driver of investment and prevents a large change in renewable build with delays to Eraring's closure.

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Residential bills will be impacted if Eraring retires on time

NSW load-weighted average price, averaged across weather reference years and weighted by POE (69.6% POE50, 30.4% POE10), by case and Eraring retirement option



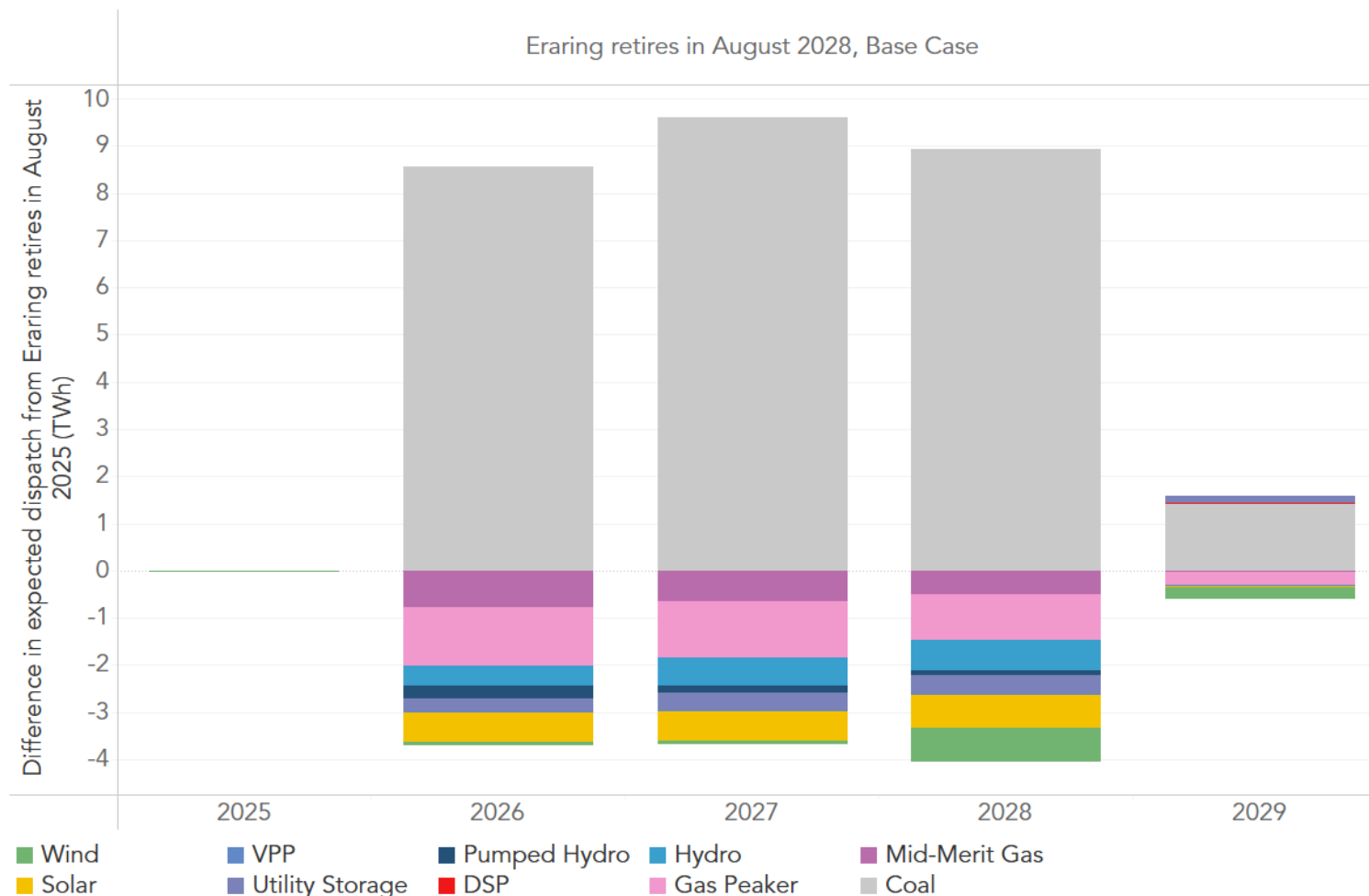
- In FY2026, the load-weighted price is approximately \$65/MWh higher when Eraring retires in August 2025.
- An elevation in load-weighted price is sustained across the modelling horizon, diminishing from FY2026, until Eraring retires in FY2029.

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Eraring dispatch pushes out NSW thermal and interstate coal

Difference in Base case NSW dispatch outcomes against Eraring retires in August 2025, averaged across weather reference years and weighted by POE (69.6% POE50, 30.4% POE10)



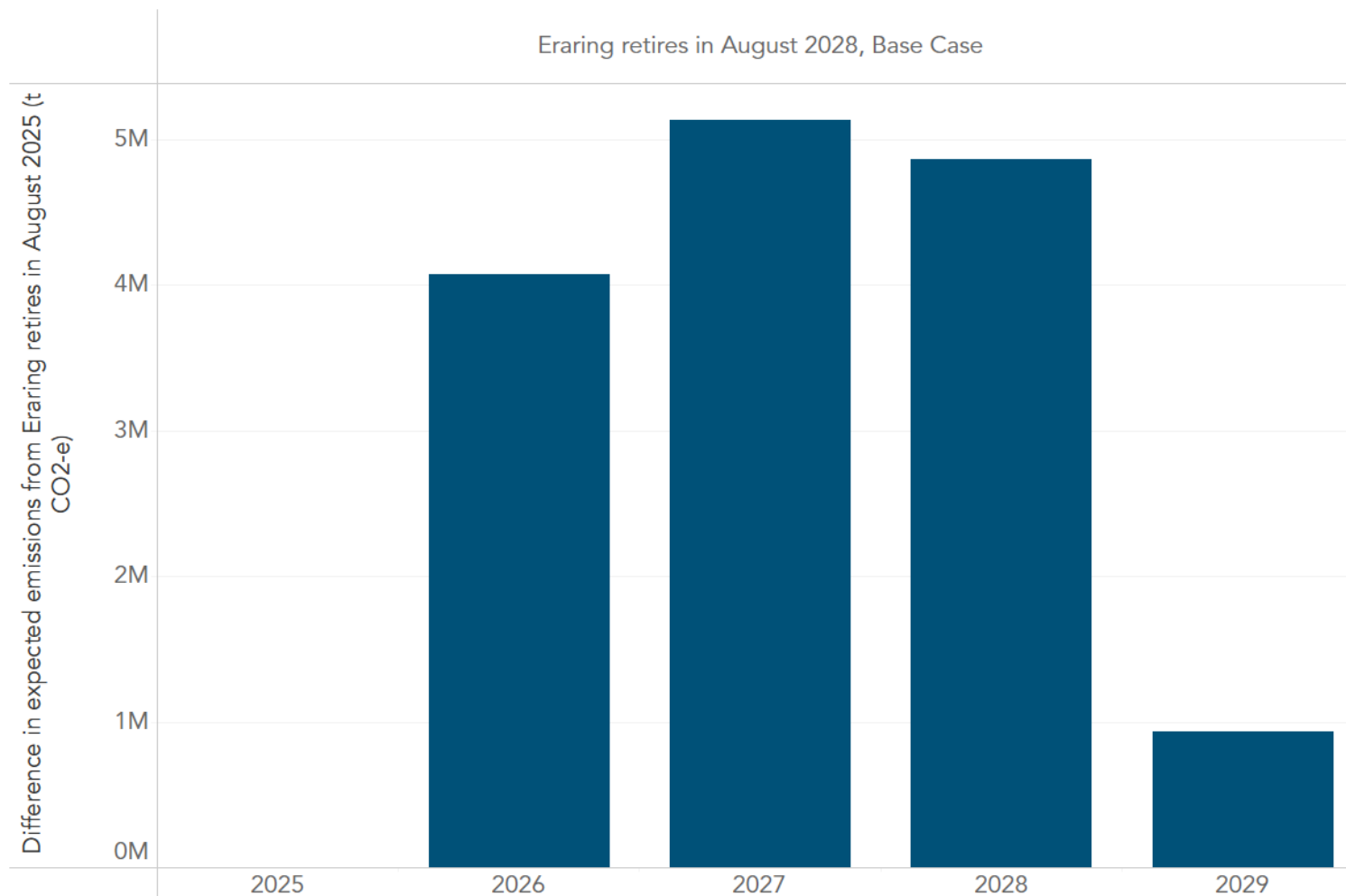
- In FY2025, Eraring has not yet retired.
- When Eraring is extended, NSW's thermal fleet and interstate coal (not pictured) is displaced.

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Emissions are higher when Eraring is extended

Difference in NEM Base Case emissions against Eraring retires in August 2025, averaged across weather reference years and weighted by POE (69.6% POE50, 30.4% POE10)



- When Eraring is extended, additional coal generation displaces mid-merit gas as baseload and a small amount of peaking plant.
- This results in an increase in emissions production, relative to the alternative of Eraring retiring in August 2025.
- However, it is important to note that emissions are *decreased* in other regions, as Eraring pushes out interstate coal generation.

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