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Melbourne
Energy
Institute



Quarterly Energy Dynamics report Q2 2022

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Moderator: **Prof Michael Brear, Director, MEI**



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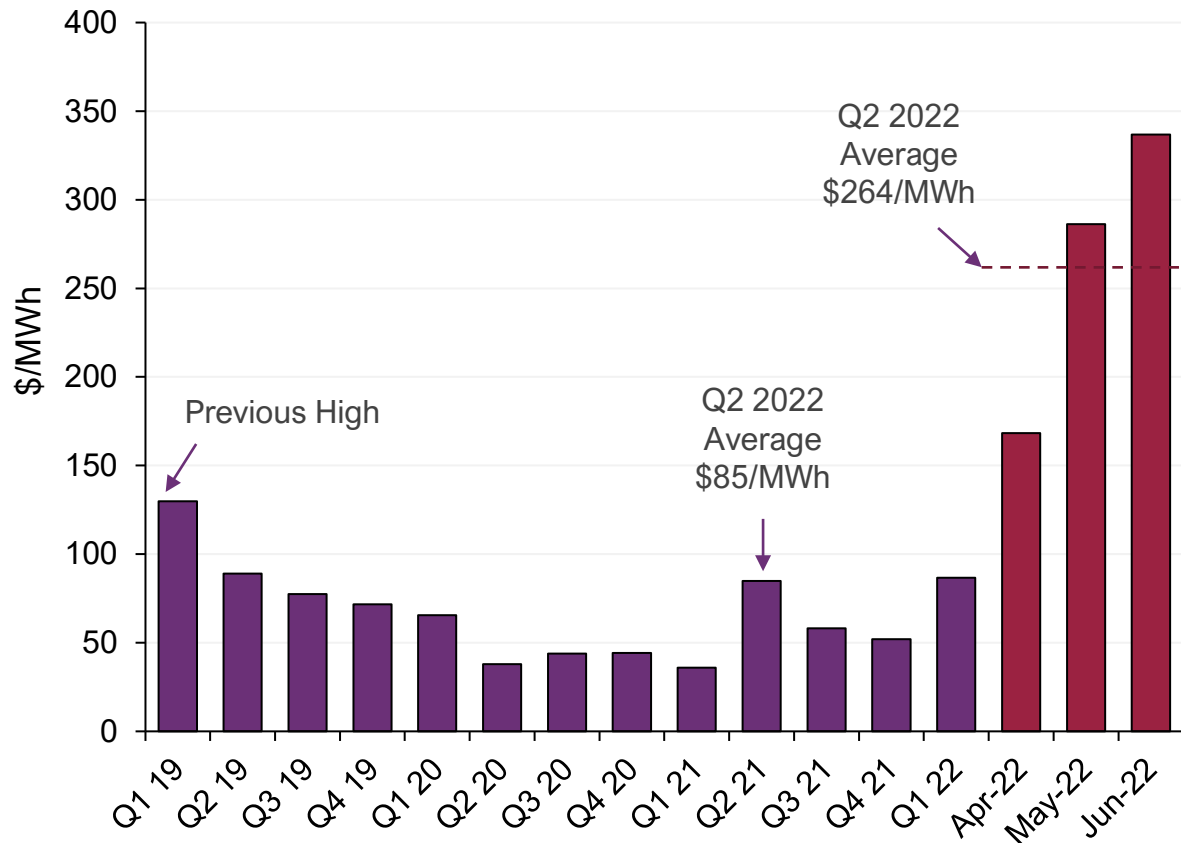


Q2 2022 Highlights

- 1) Highest observed NEM price, with significant volatility
- 2) In June an Administered Price Period (APP) occurred in mainland NEM regions followed by market suspension in all NEM regions.
- 3) High international energy commodity prices
- 4) Significant change in generation mix as black coal-fired generation declines to it's lowest Q2 output while gas generation was up 27%
- 5) East Coast Gas markets also observed record high prices and price capping events with greater reliance on Victorian supply

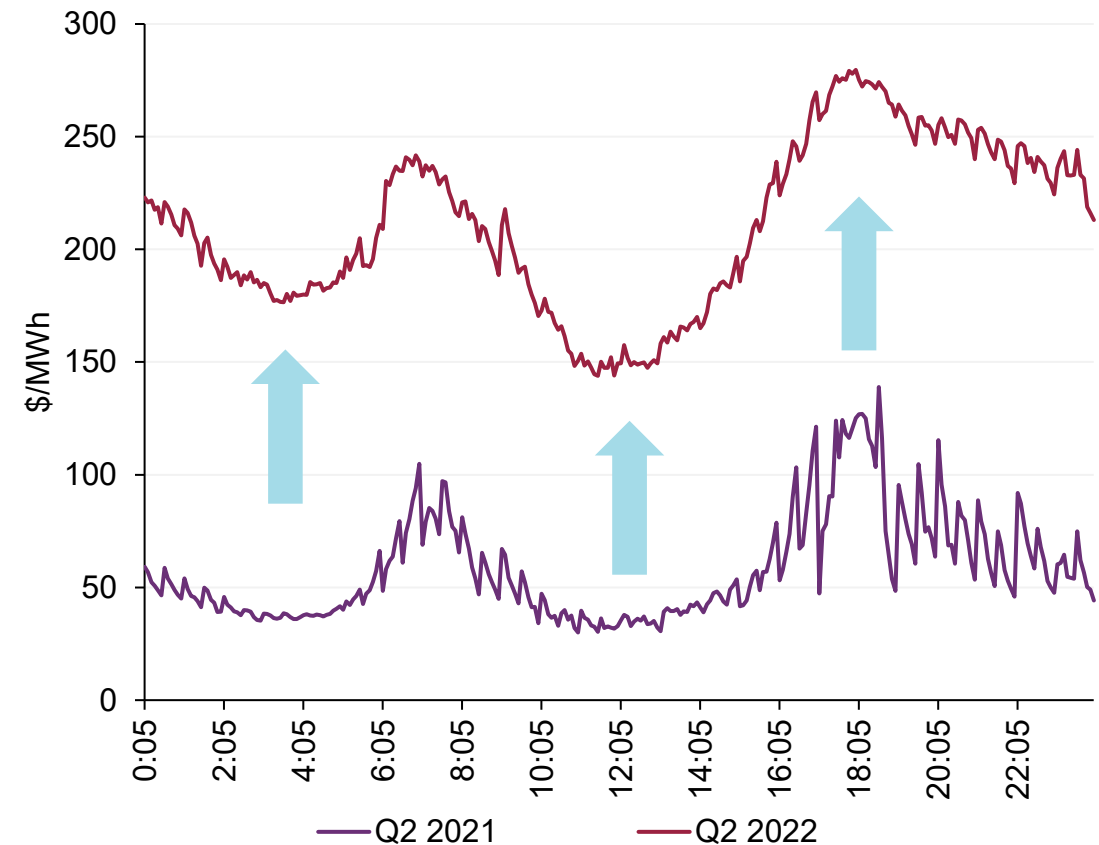
Electricity Prices

NEM average spot prices¹ hit all time high



¹Uses time-weighted average which is simple average of regional wholesale electricity spot prices

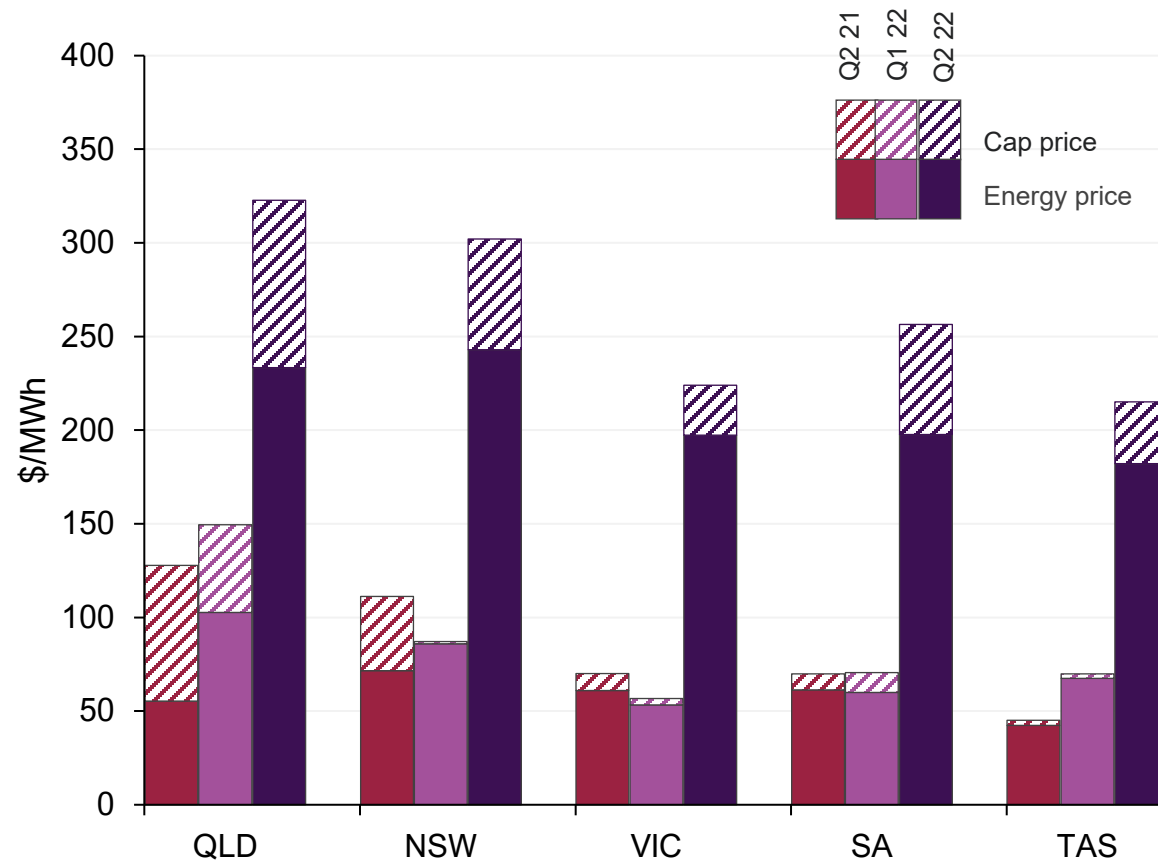
Sub \$300/MWh (energy²) price increases significantly



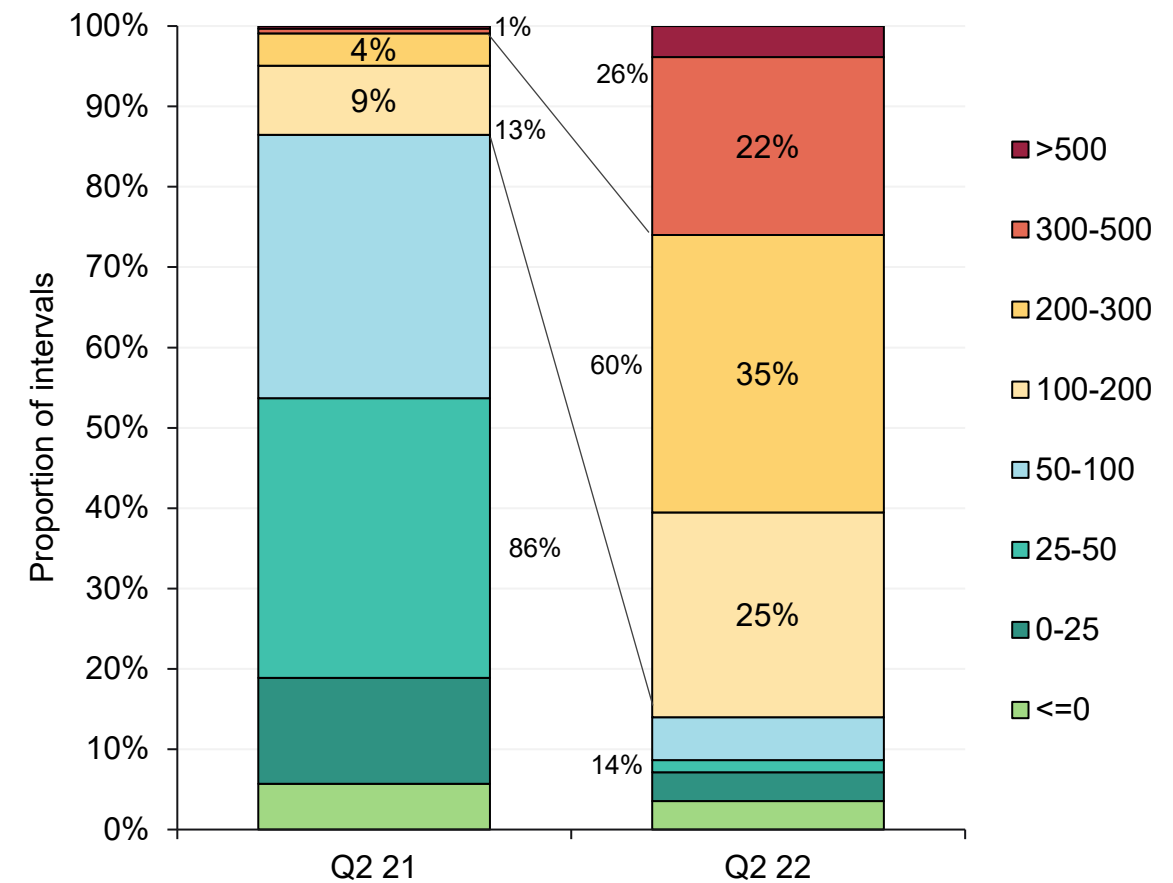
²'Energy' price calculation in analysis of spot electricity averages truncates the impact of price volatility (price above \$300/MWh) 3

Price Volatility

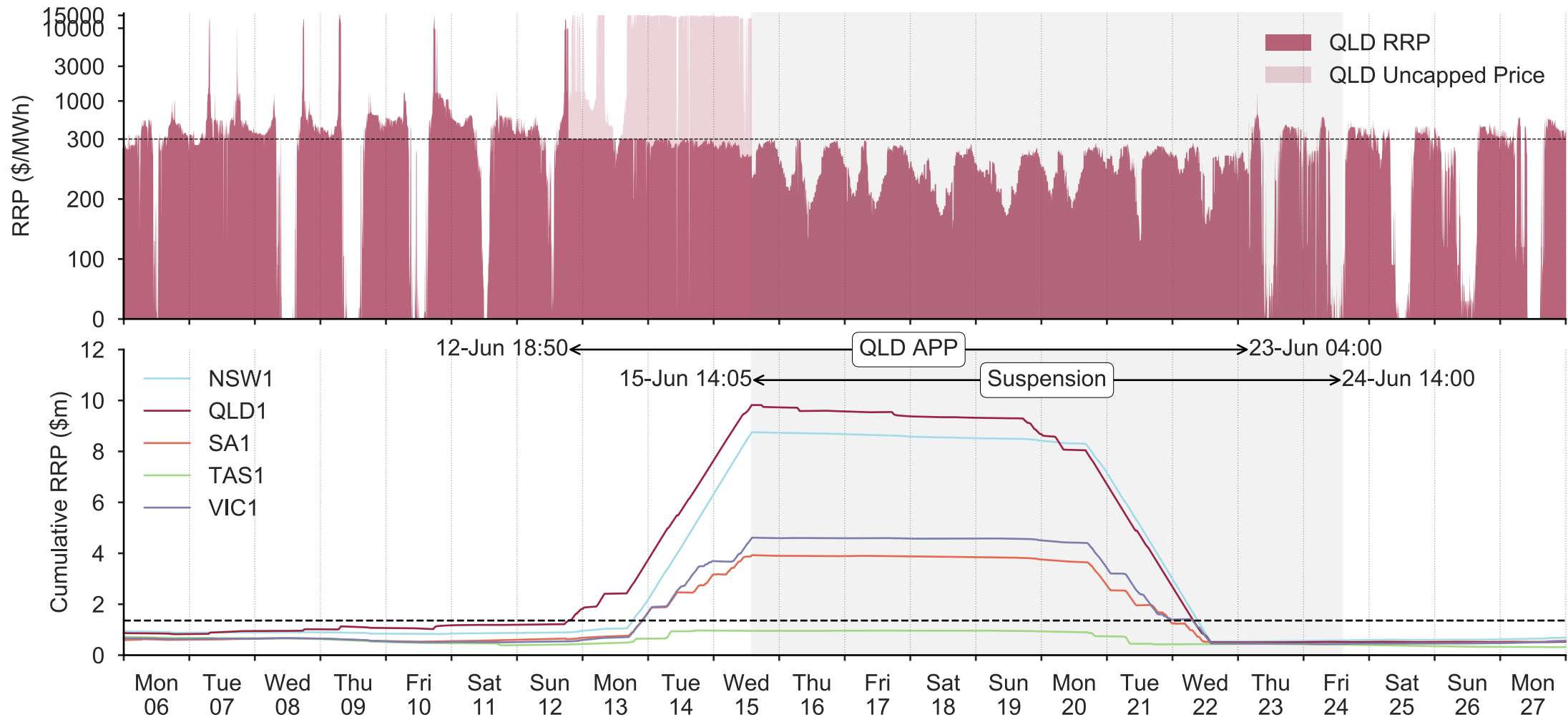
High energy prices, increased volatility



Occurrence of high prices increase



APP/Suspension

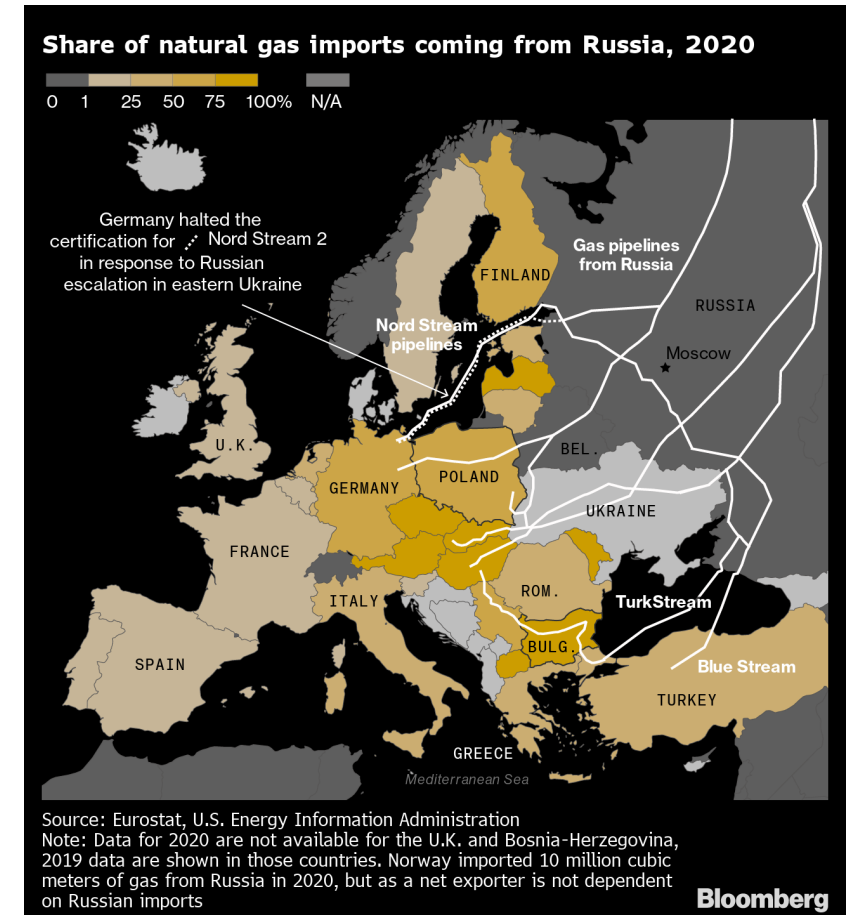


International Commodity Prices

International commodity prices have been steadily increasing

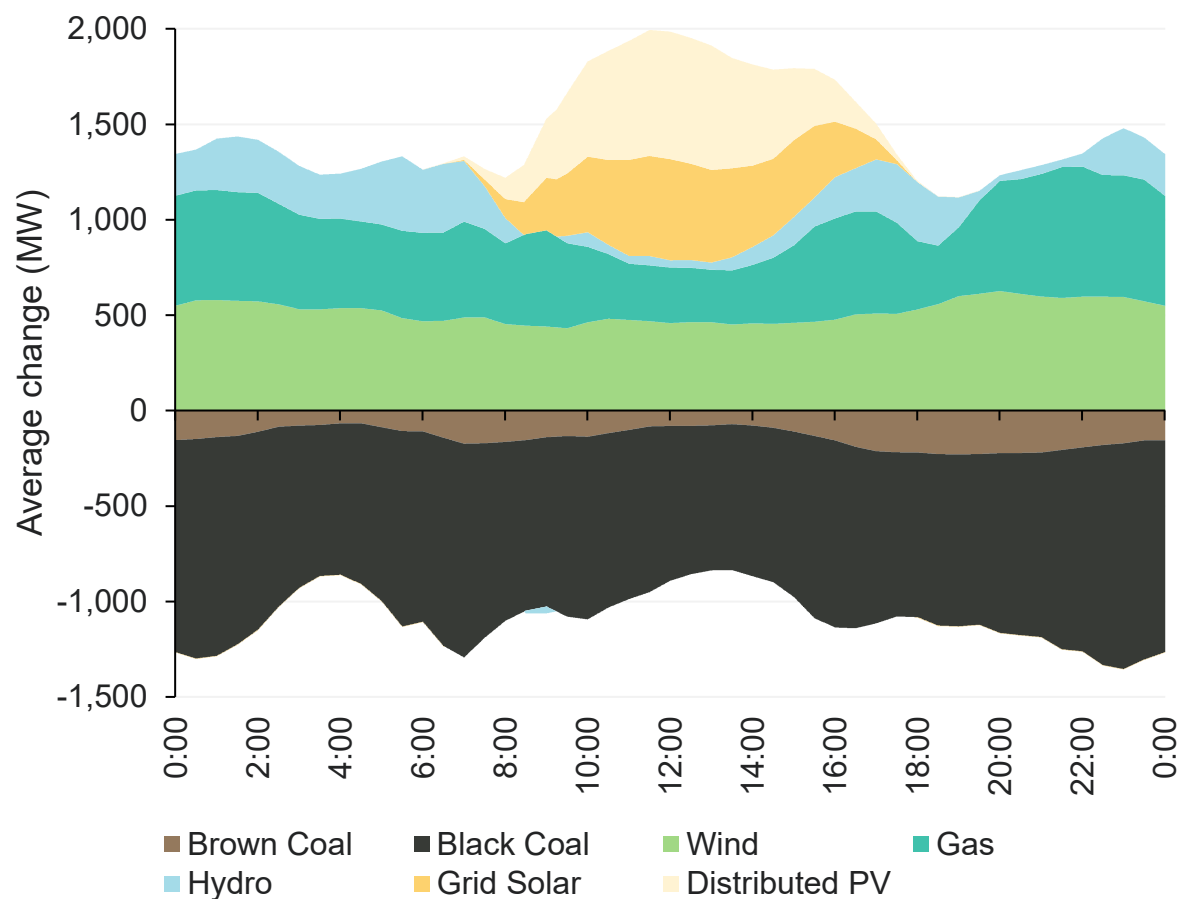


Source: Bloomberg ICE



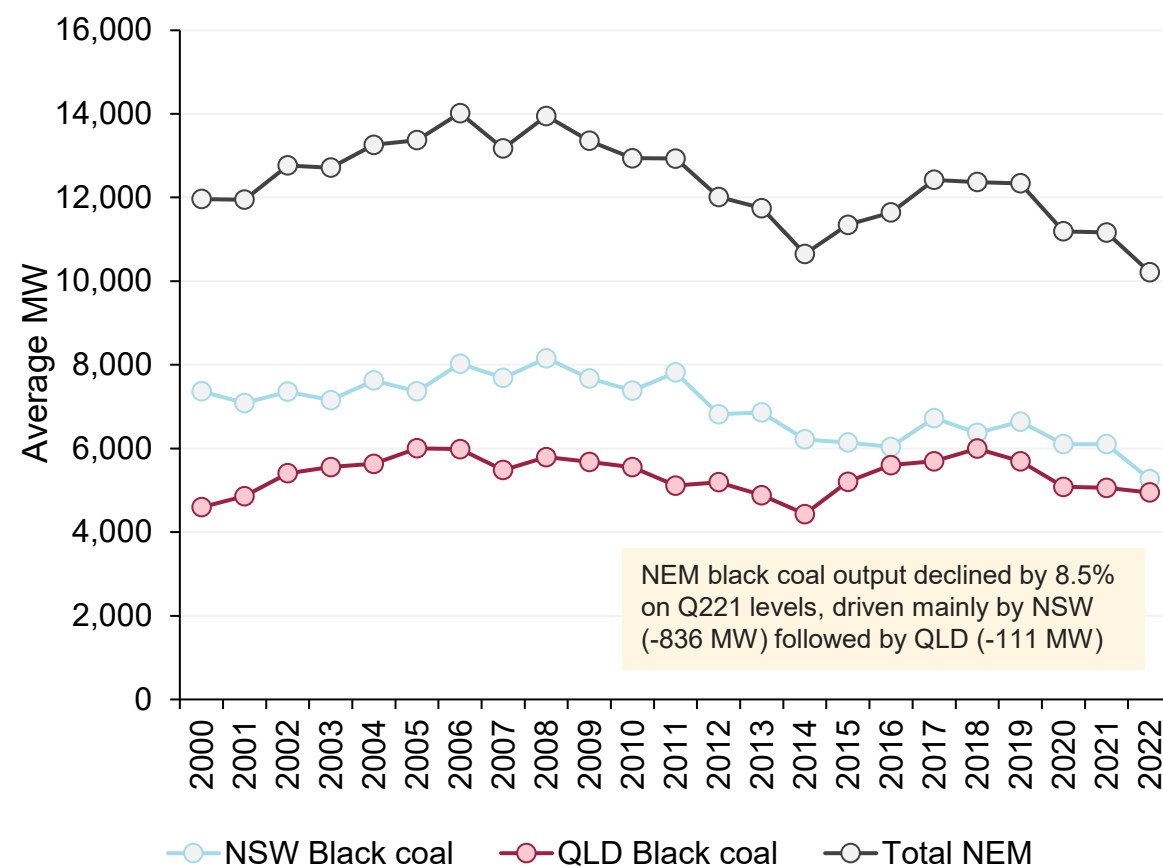
Supply mix changes

Coal down while renewables and gas increased



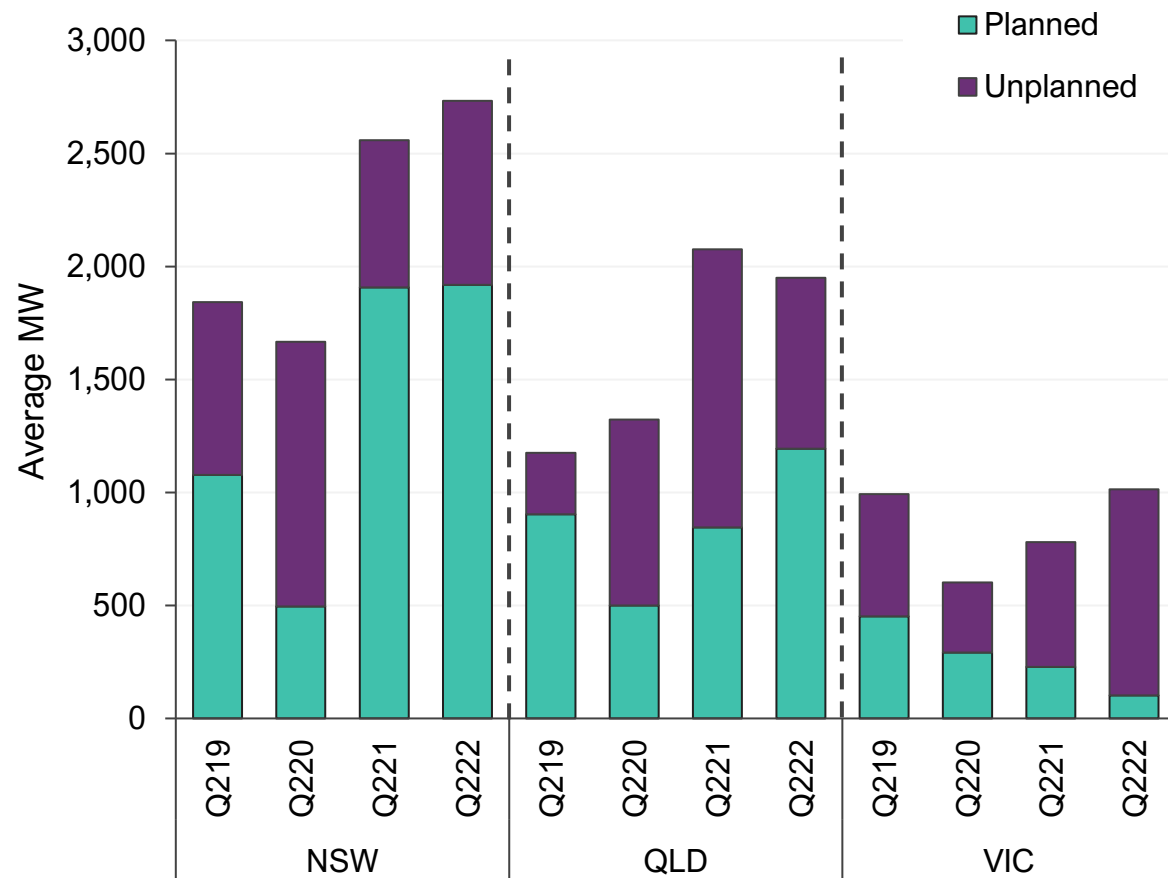
Lowest Q2 black coal output since NEM start

Q2 black coal-fired generation by region



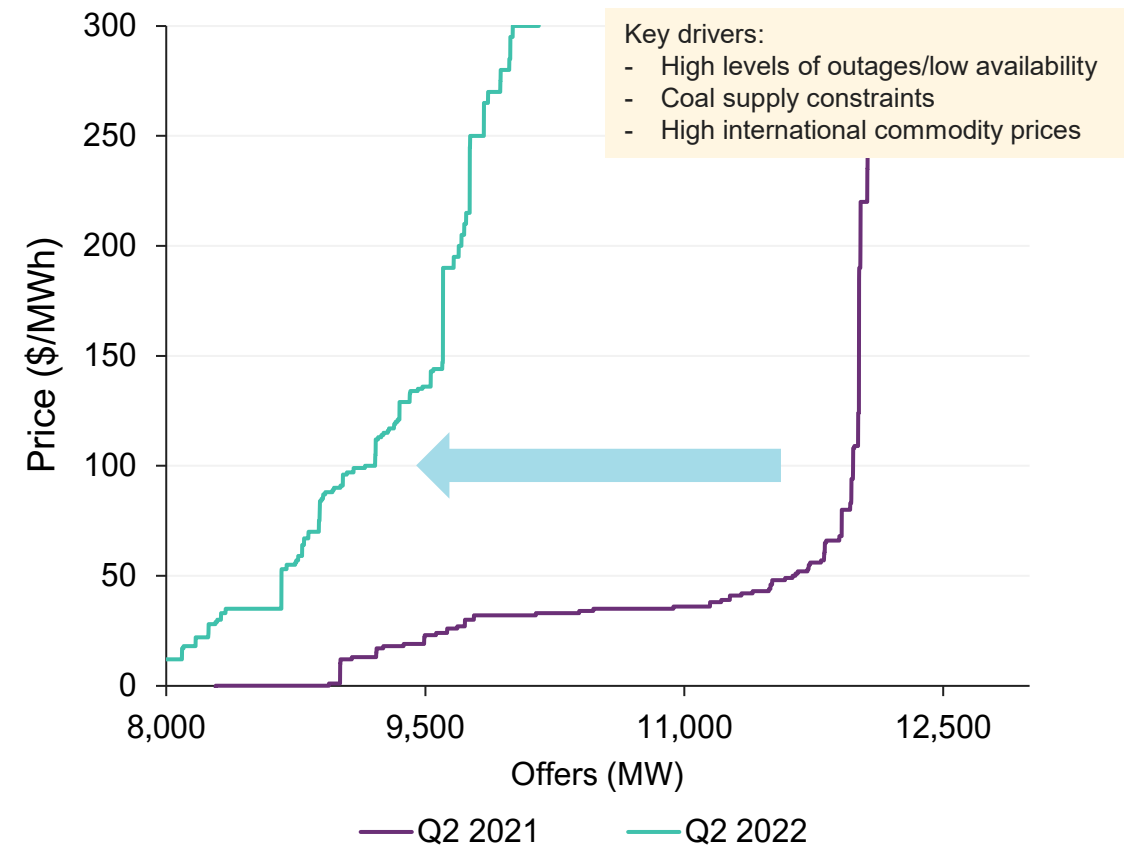
Coal output drivers

High levels of coal outages across NEM



Offers under \$100/MWh reduced by ~2,700 MW

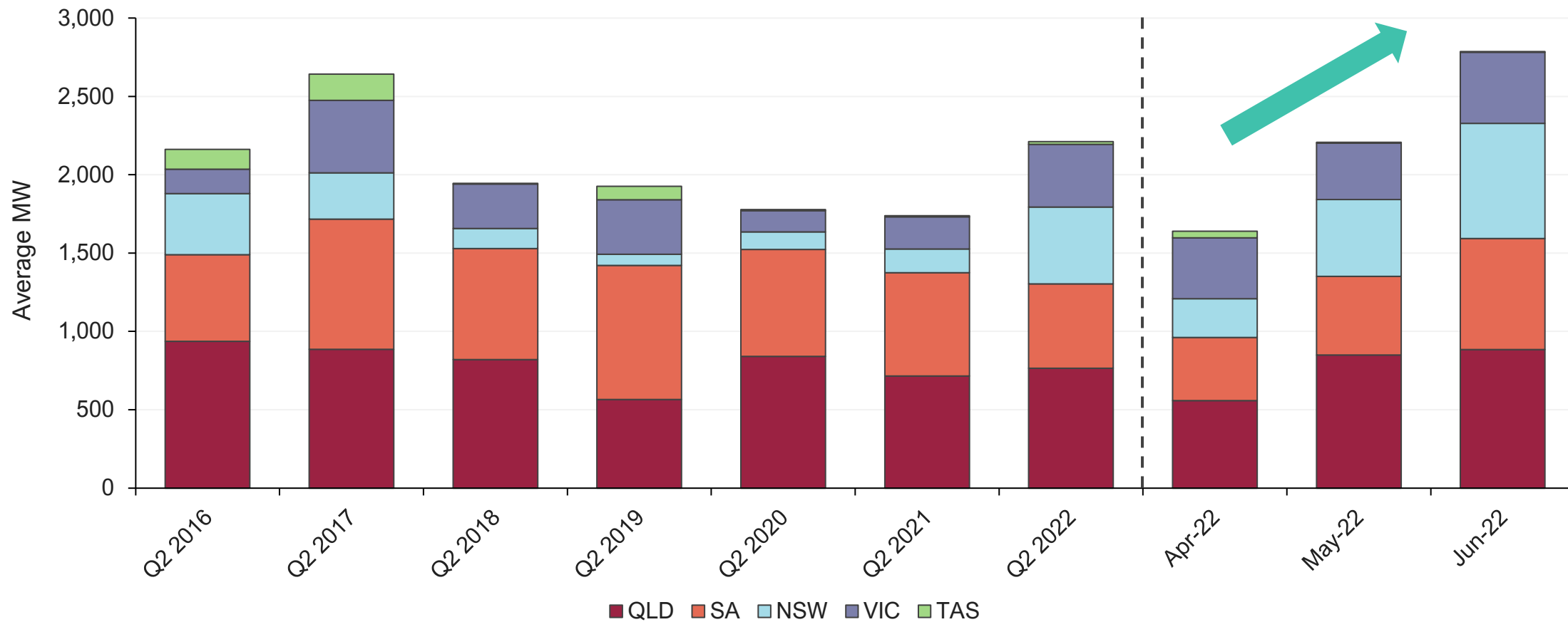
NEM Black coal bid supply curve – Q222 vs Q221



Gas generation ramped up

Ramp up of gas generation during the quarter, representing the highest Q2 levels since 2017

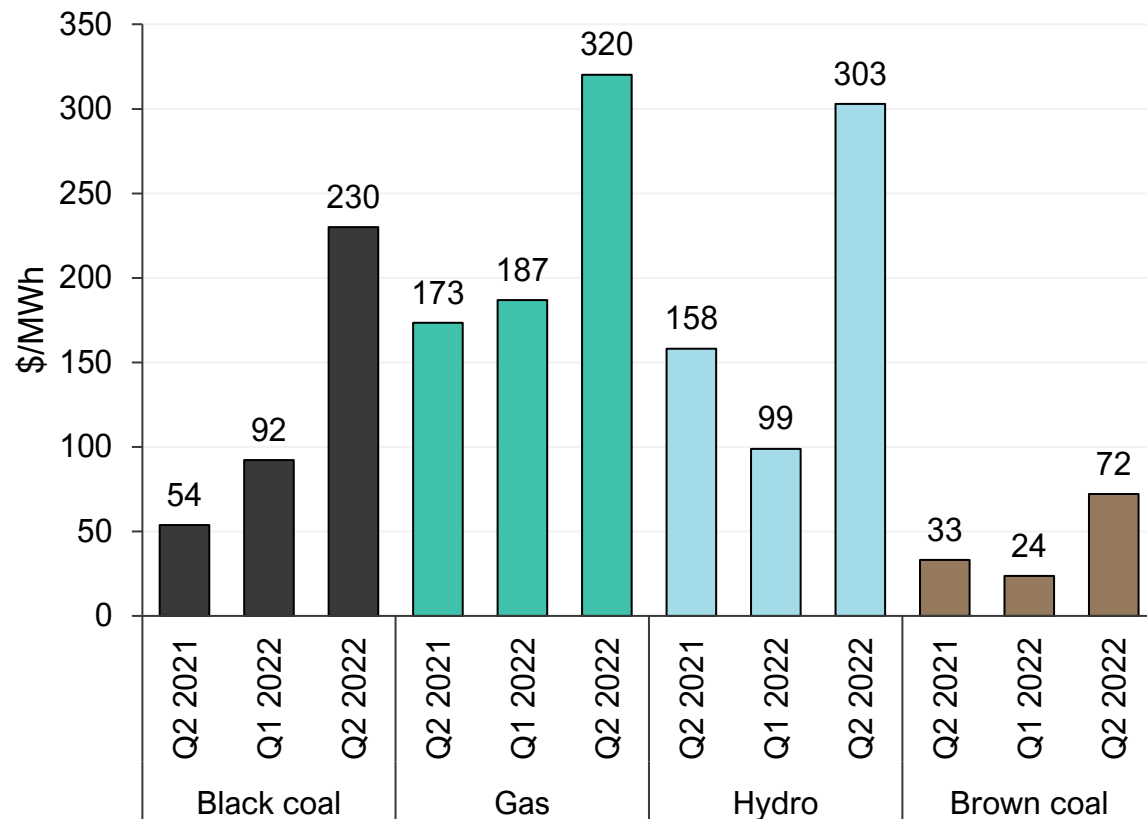
Average gas-fired generation by state – Q2s and monthly for Q222



Marginal price set increased

Average marginal price set increased

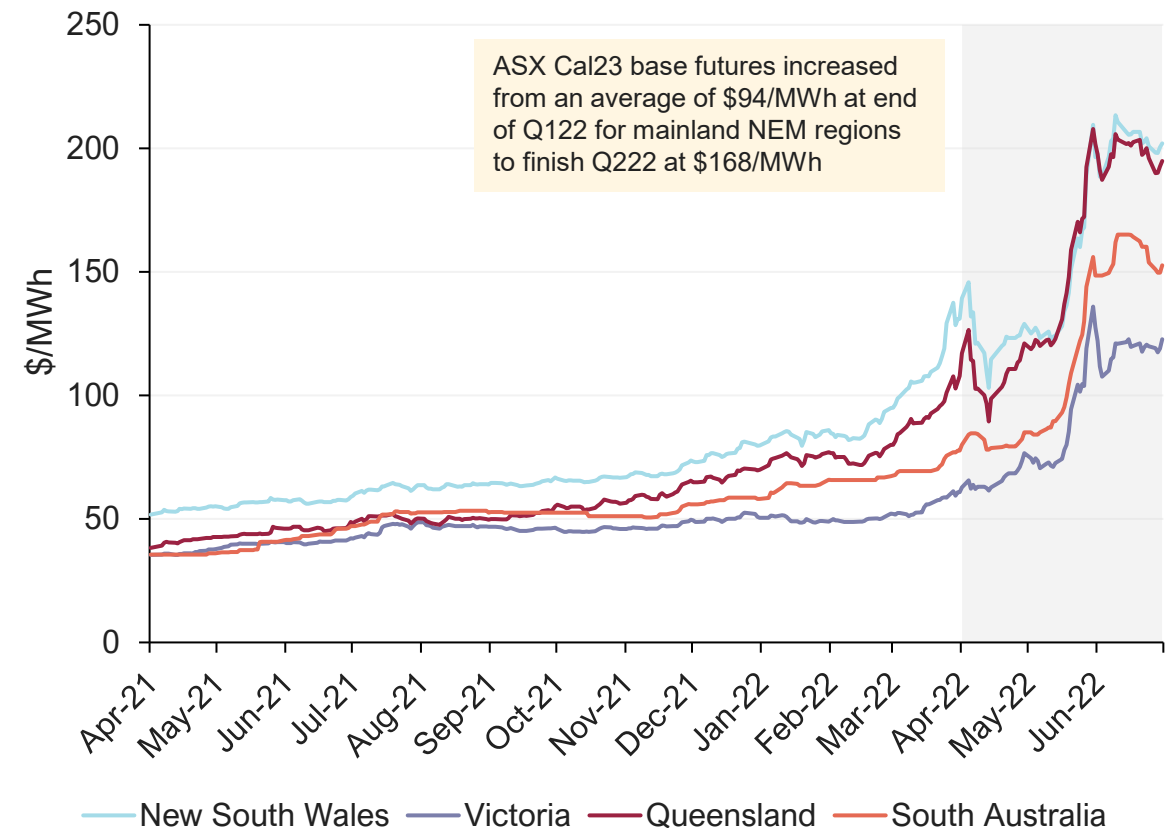
Average NEM spot prices set by fuel type – selected quarters¹



¹Q222 data only includes periods up to commencement of APP in QLD

Strong rally in ASX futures over Q2

Daily Cal23 base futures price by region

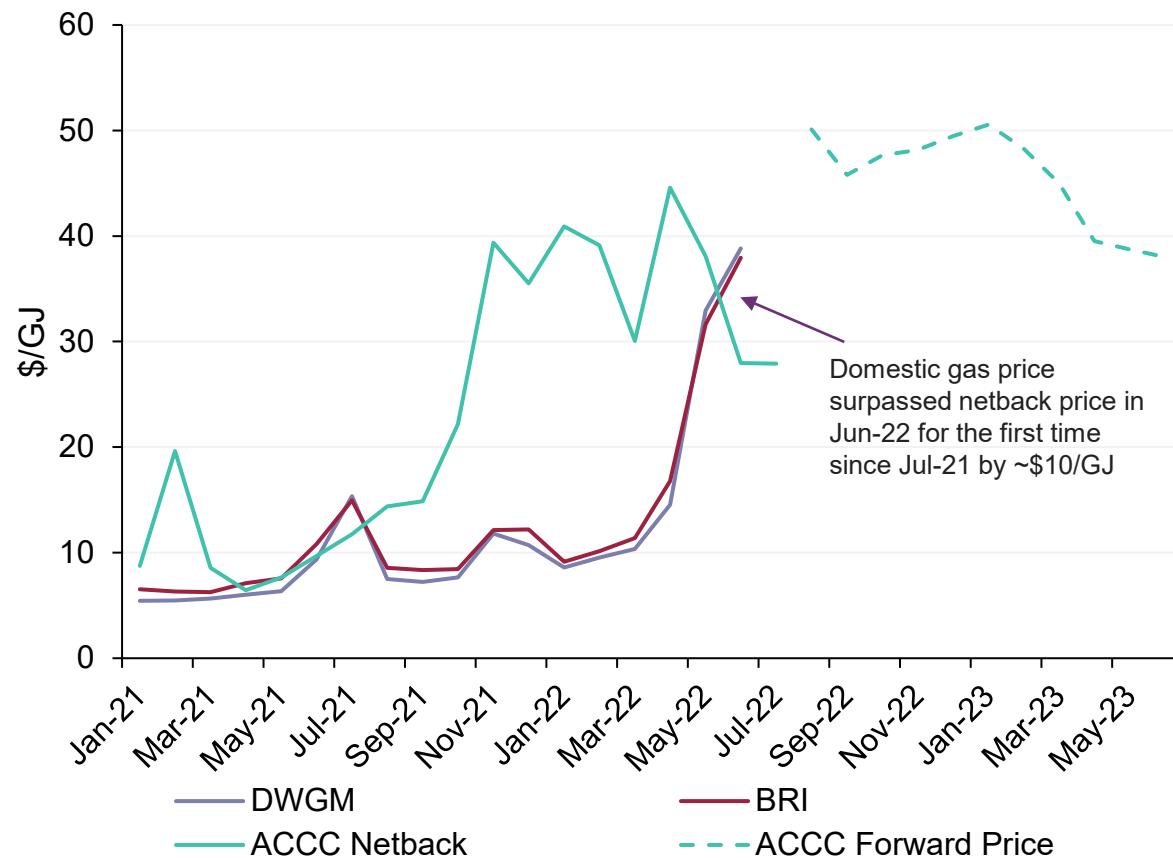


Source: ASX Energy

East coast gas prices

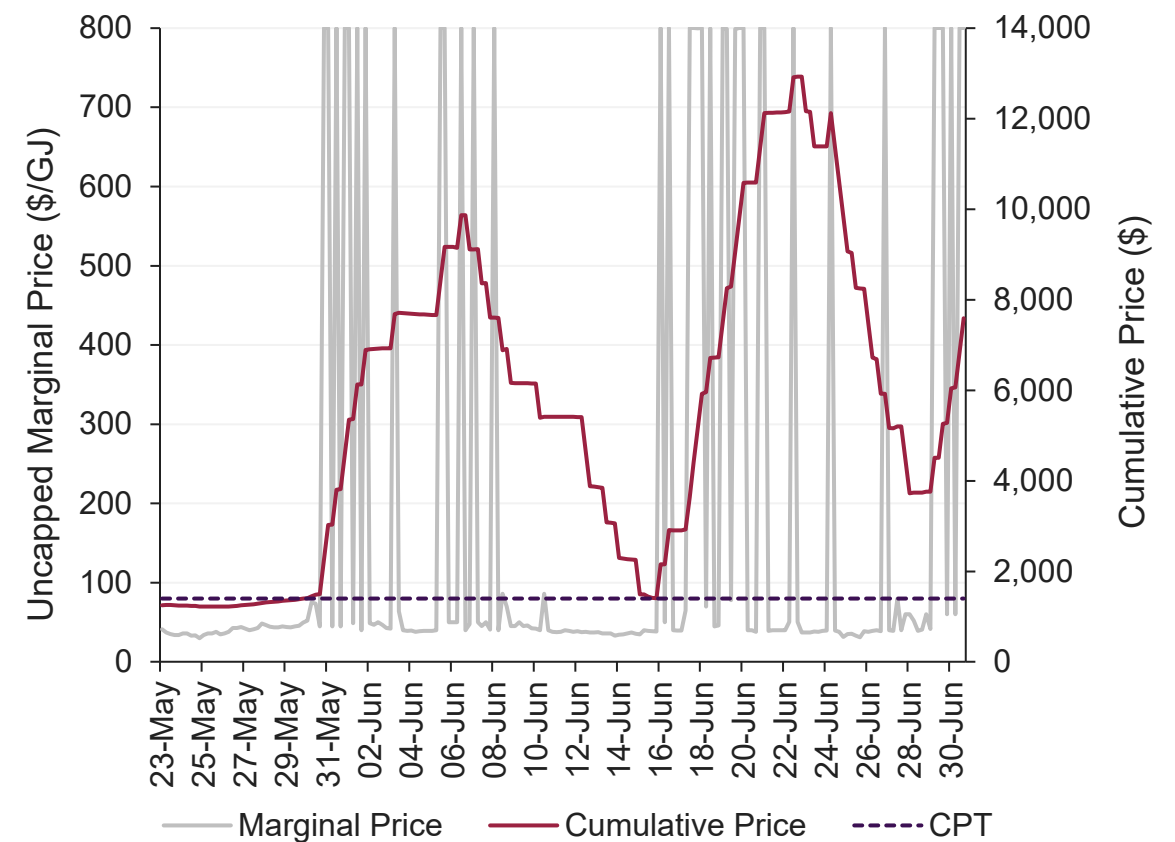
East coast gas prices up 246% from Q2 2021

Simple average of AEMO's 5 spot markets compared to ACCC LNG Netback price



APC triggered in the DWGM on 30 May

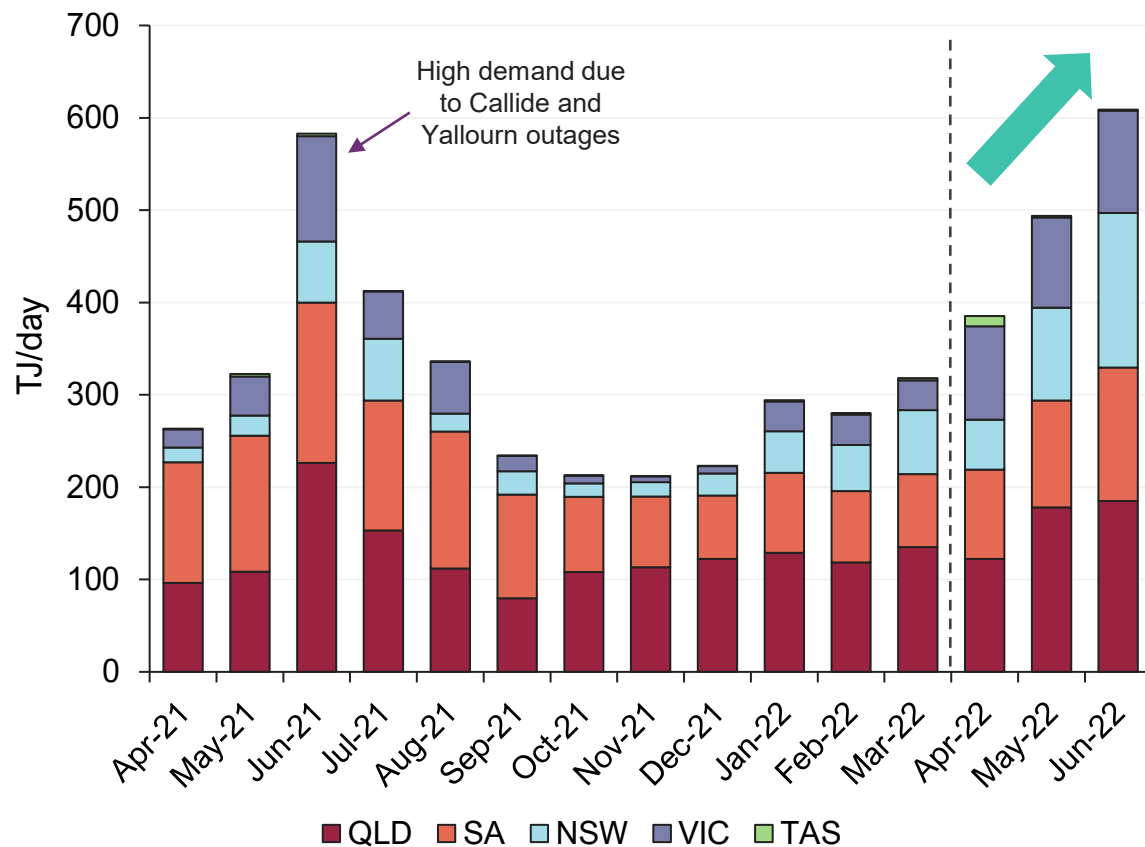
Uncapped DWGM marginal price and cumulative price



Gas-fired generation demand

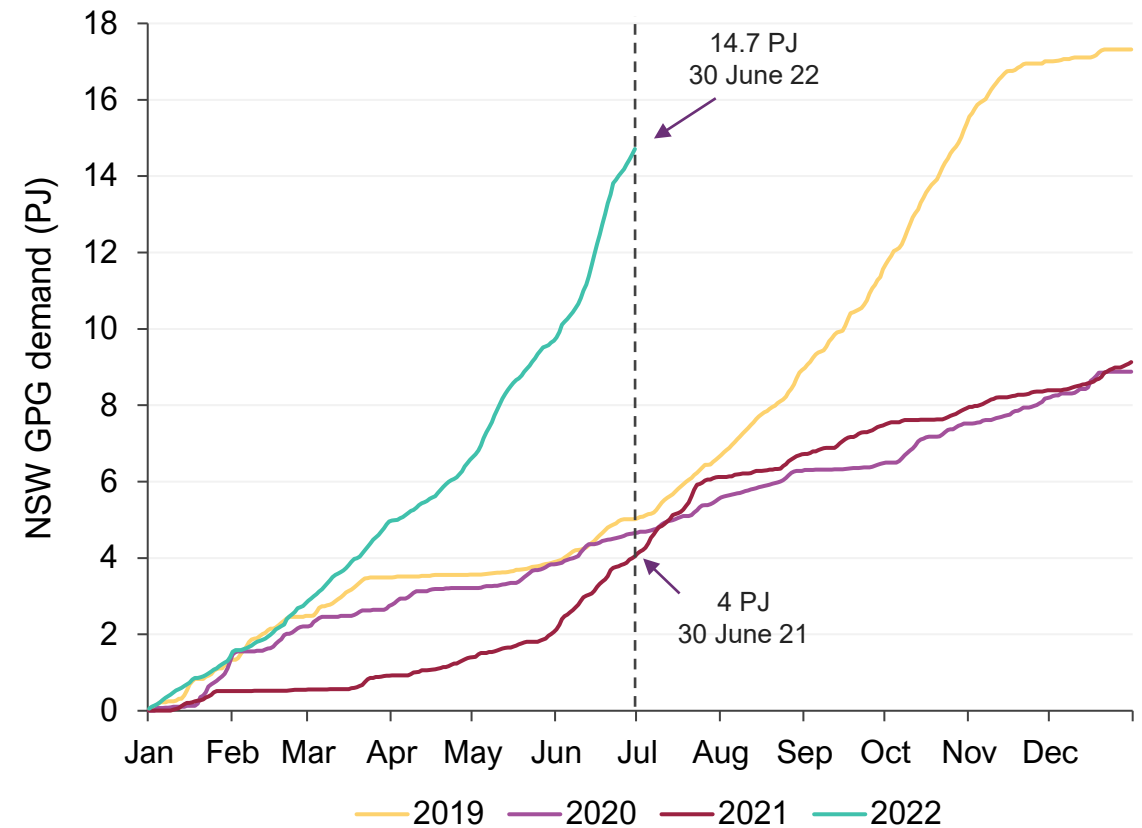
Significant gas-fired generation demand increase in Vic and NSW

Average daily demand for gas-fired generation by month



NSW gas demand more than treble recent year levels

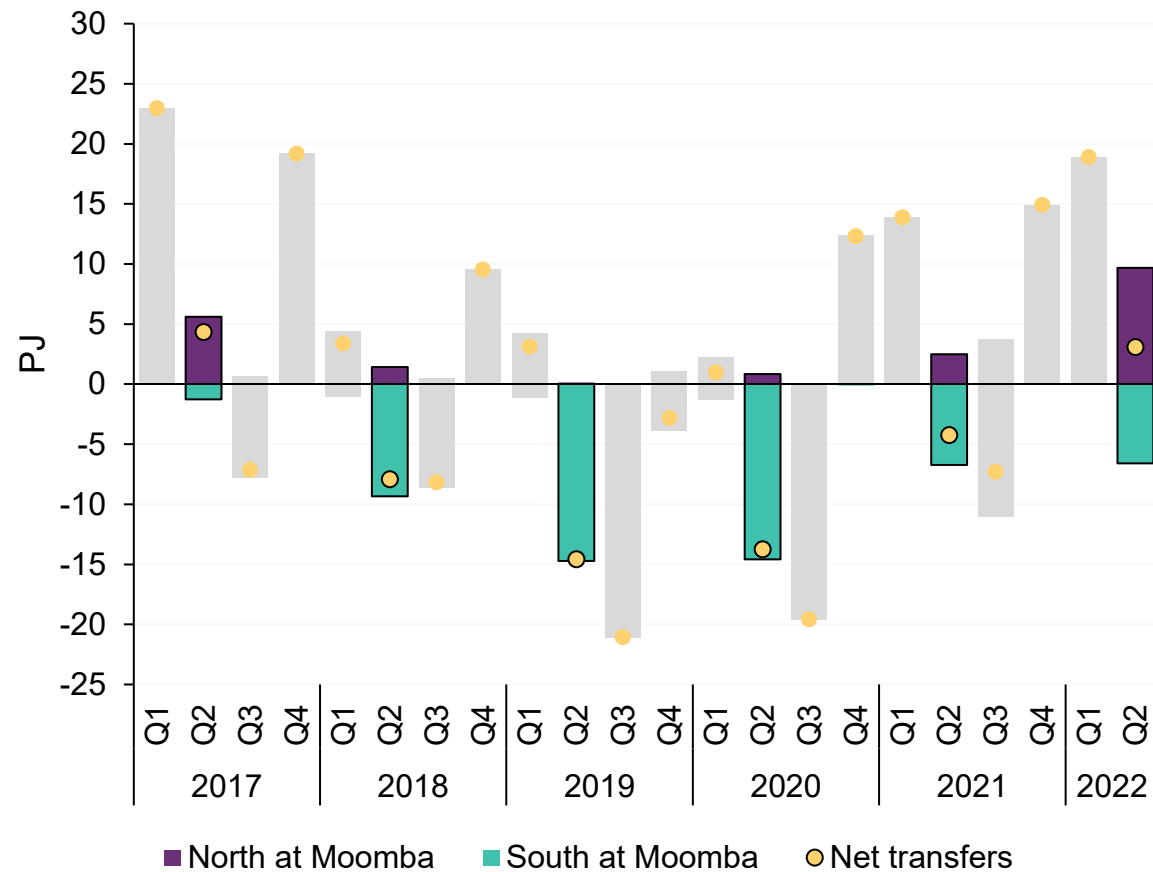
Cumulative annual demand for gas-fired generation in NSW



Greater reliance on Victorian supply

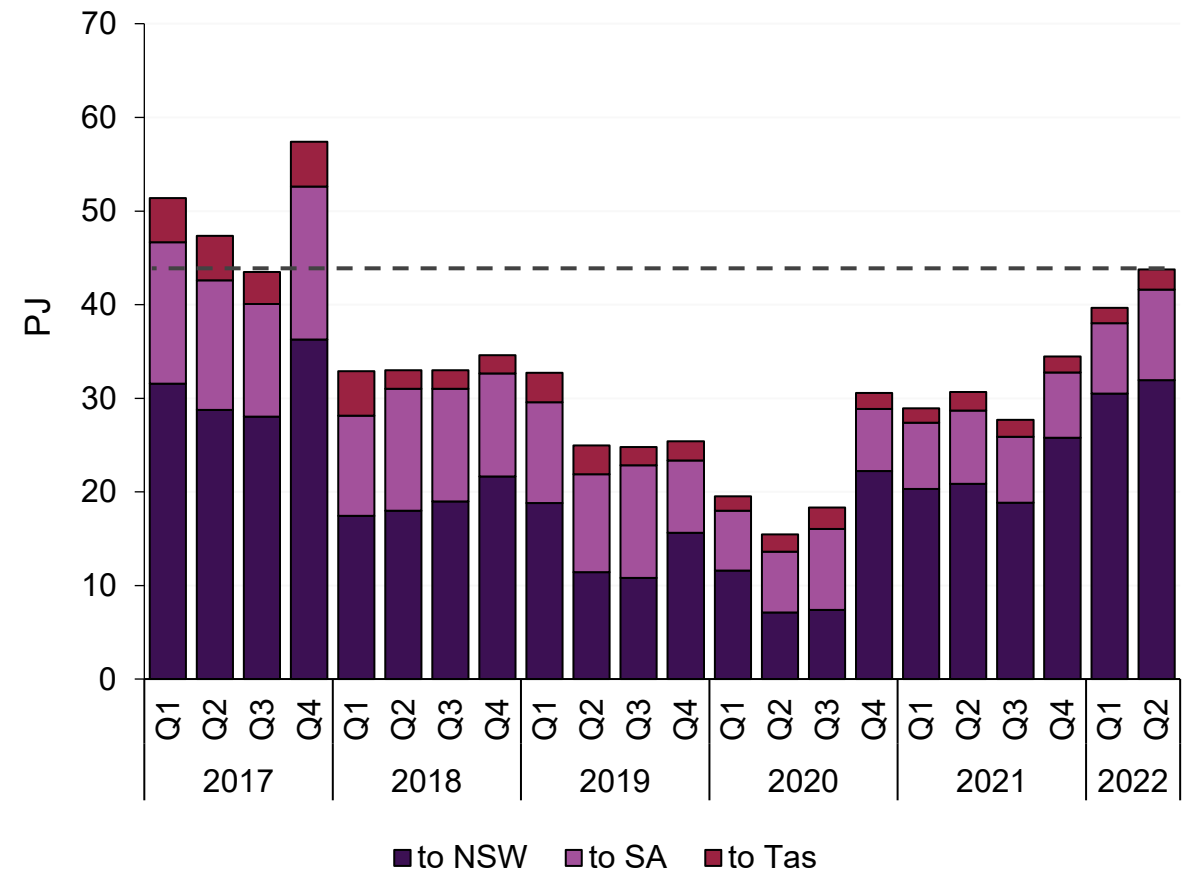
Net Q2 flows into Qld on SWQP for the first time since 2017

Flows on the South West Queensland Pipeline (SWQP) at Moomba



Highest Victorian gas exports for any quarter since Q4 2017

Victorian net gas transfers to other regions





For more information visit

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