

Quarterly Energy Dynamic (QED) Report – Q2 2023



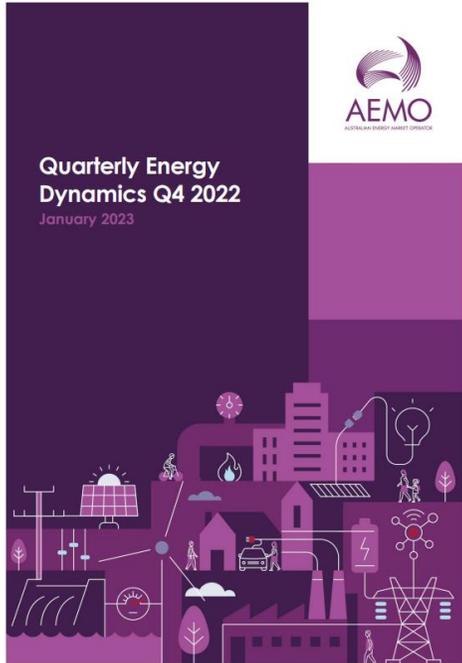
Presented to WA Gas Consultative Forum

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Operations & Support

10 August 2023



Overview

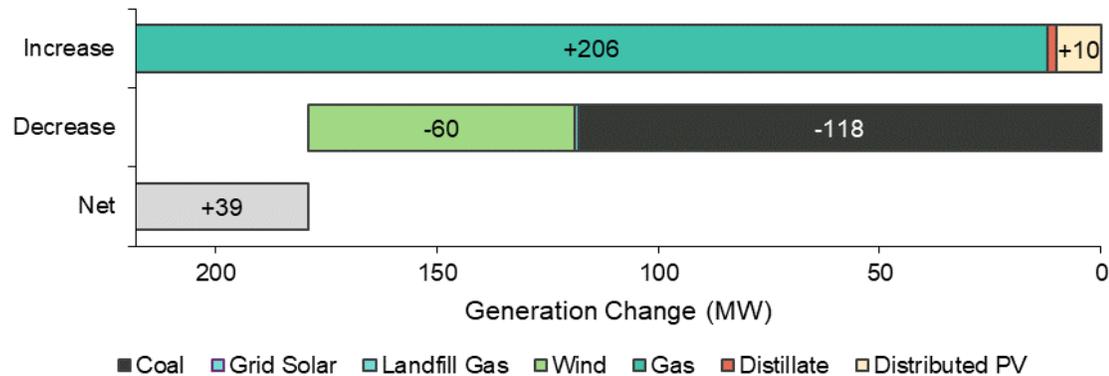


The Q2 2023 QED was published on 27 July 2023.
Key insights include:

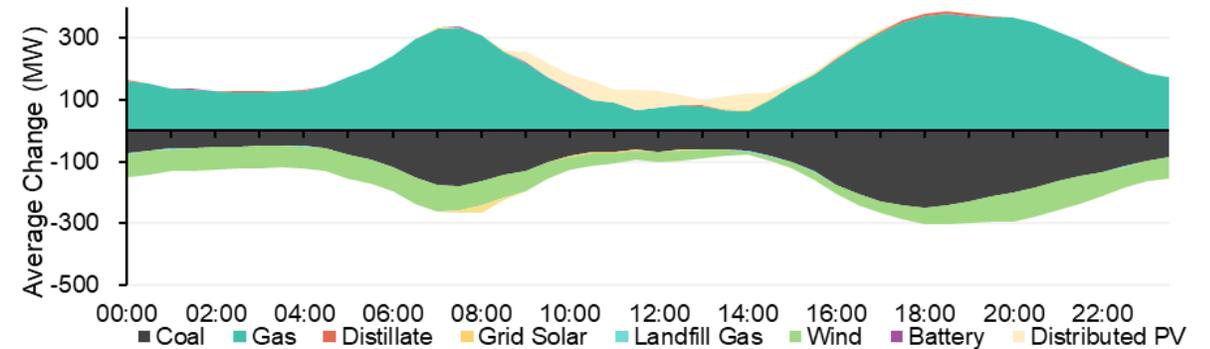
- Q2 record high average gas-fired generation and Q2 record low average coal-fired generation.
- An increase in gas production and gas demand for electricity generation.
- Steps taken to overcome challenging operational conditions.
- Record high weighted average Balancing Price and Q2 record high STEM Price.

Change in fuel mix

Change in quarterly average generation – Q2 2023 vs Q2 2022



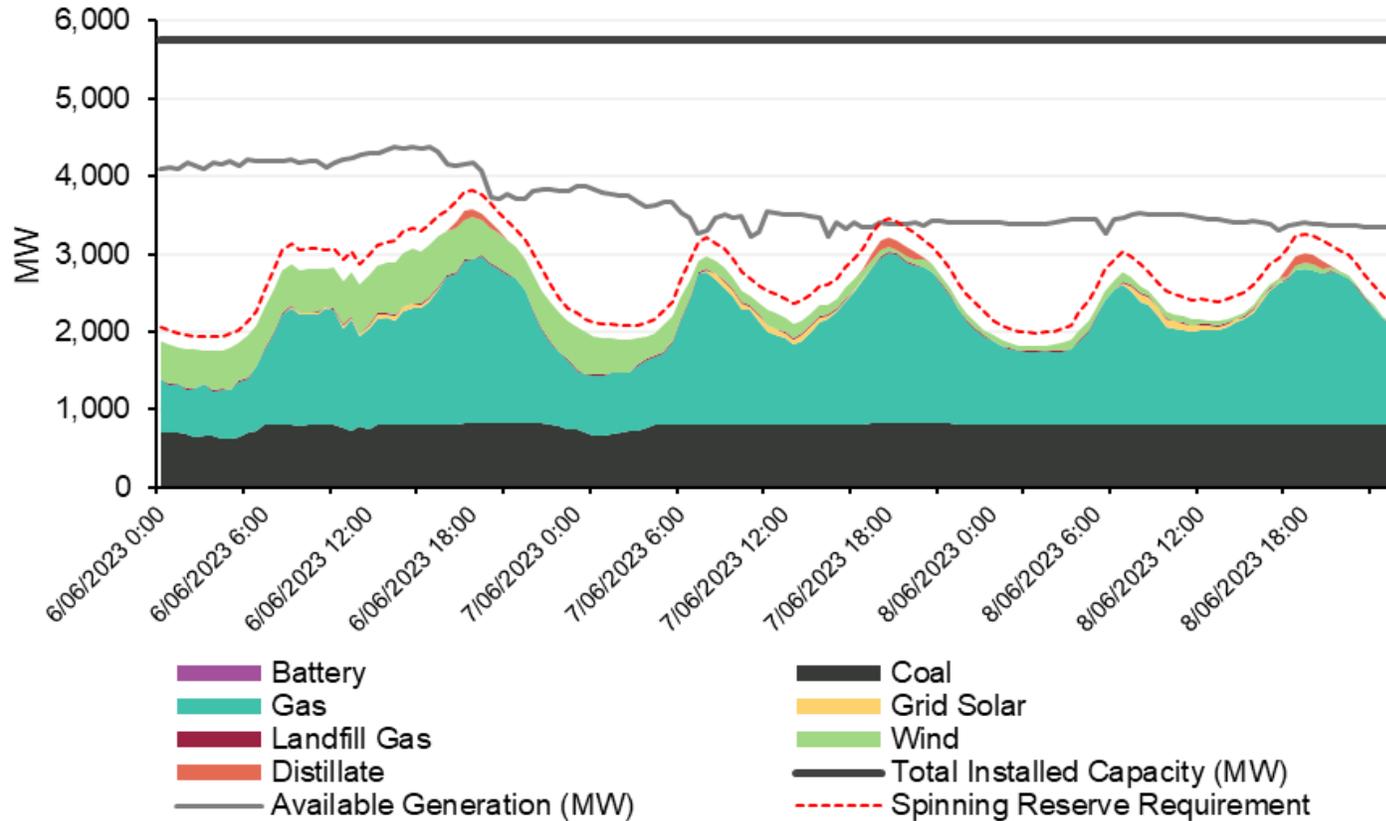
Average WEM change in fuel mix by time of day – Q2 2023 vs Q2 2022



- A WEM quarterly average underlying demand was 2,250 MW, an increase of 39 MW (+1.4%) compared to Q2 2022.
- B Gas-fired generation increased by an average of 206 MW (+27%) to a Q2 record high.
- C Coal-fired generation decreased, on average, in every interval. Conversely, gas-fired generation increased, on average, in every interval.

Tight operating conditions

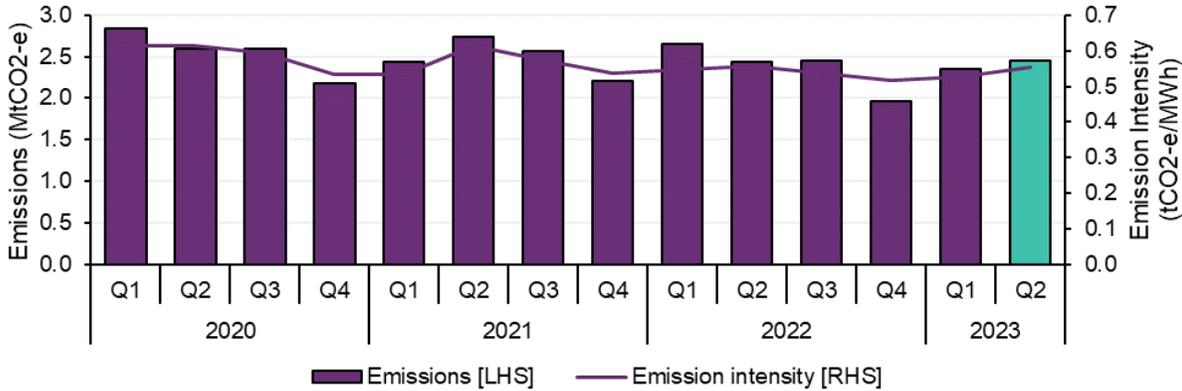
Fuel mix and availability over 6 – 8 June 2023



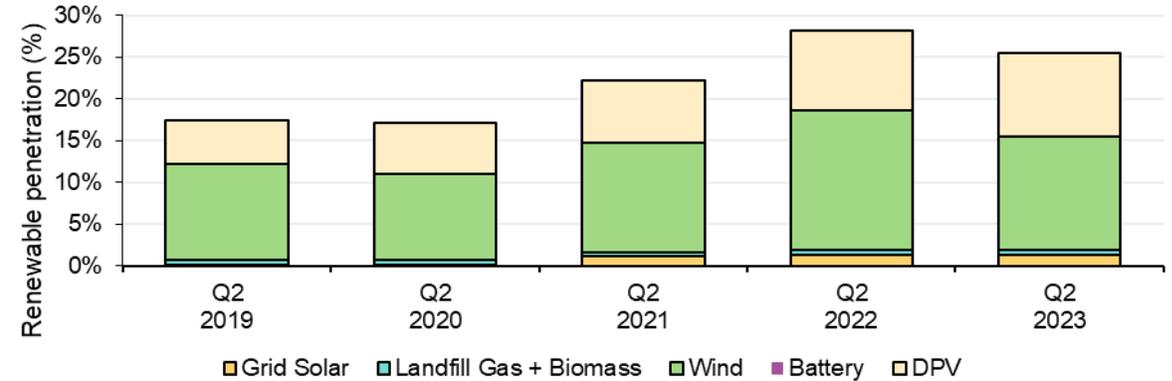
A AEMO forecasted Lack of Reserve (LOR) 1 conditions on 23 days and LOR 2 days on five days over the month of June. This was most notable over 6-8 June 2023.

Emissions & Renewables

Quarterly WEM emissions and emission intensity – Q1 2020 to Q2 2023



Renewable penetration components – Q2 2019 to Q2 2023



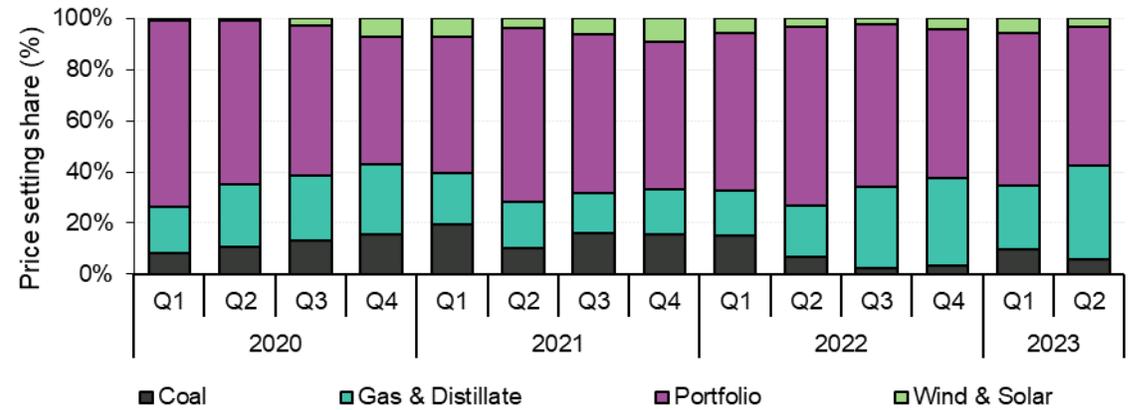
- A WEM emissions increased by 1.4% while WEM emission intensity decreased by less than 1%.
- B Sustained low levels of wind in Q2 2023 led to lower renewable penetration compared to Q2 2022.

Price dynamics

Wholesale Energy Prices – Q1 2020 to Q2 2023



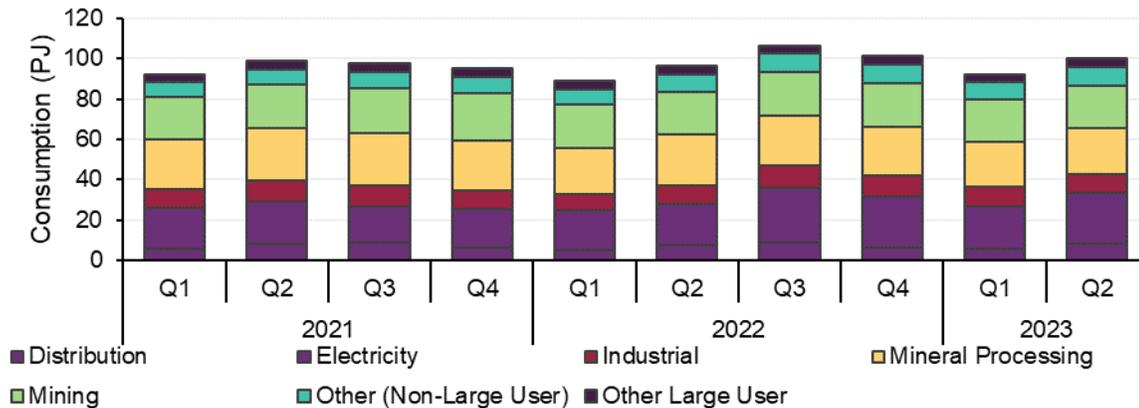
Price Setting – Q1 2020 to Q2 2023



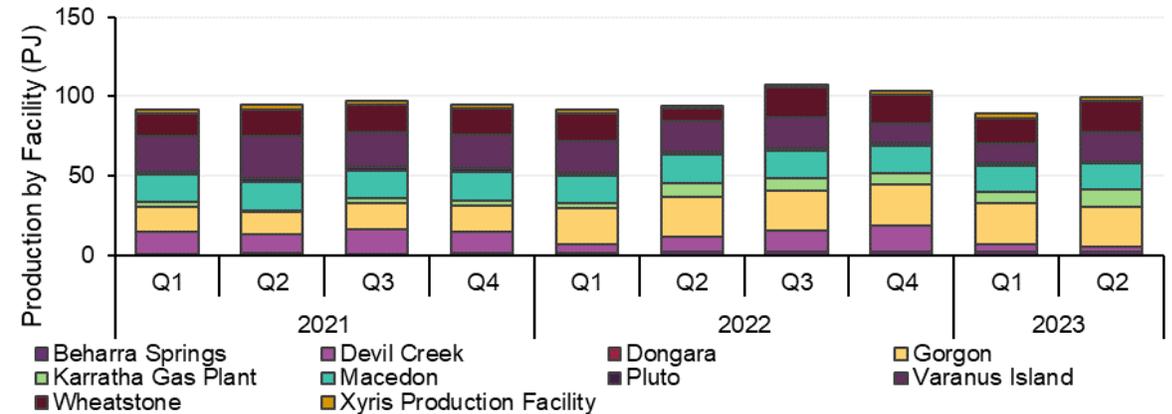
- A This quarter’s weighted average Balancing Price was \$113.36/MWh, the highest quarterly average of all time.
- B The frequency with which gas-fired generation set the Balancing Price has increased significantly from Q2 2022 levels, putting upward pressure on the Balancing Price.

WA gas production & consumption

WA quarterly gas consumption by sector –
Q1 2021 to Q2 2023



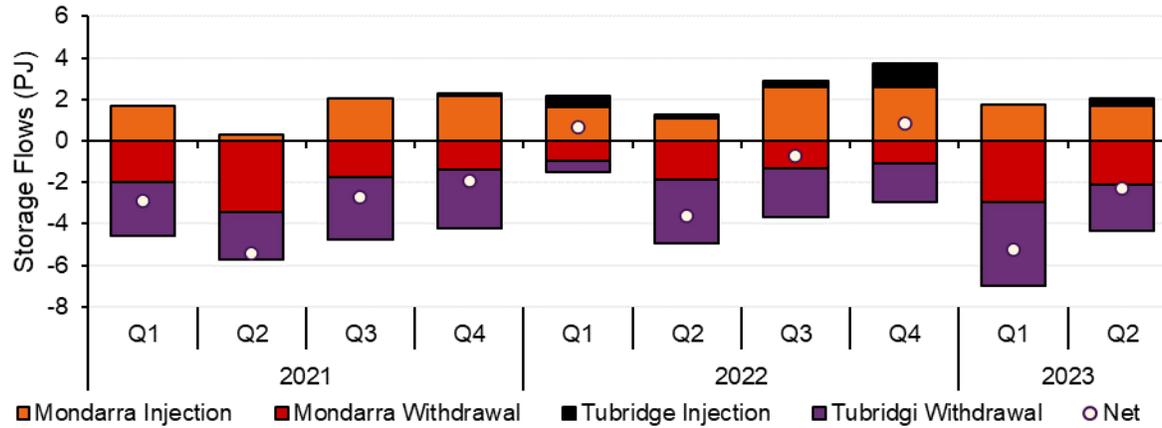
WA quarterly gas production by facility –
Q1 2021 to Q2 2023



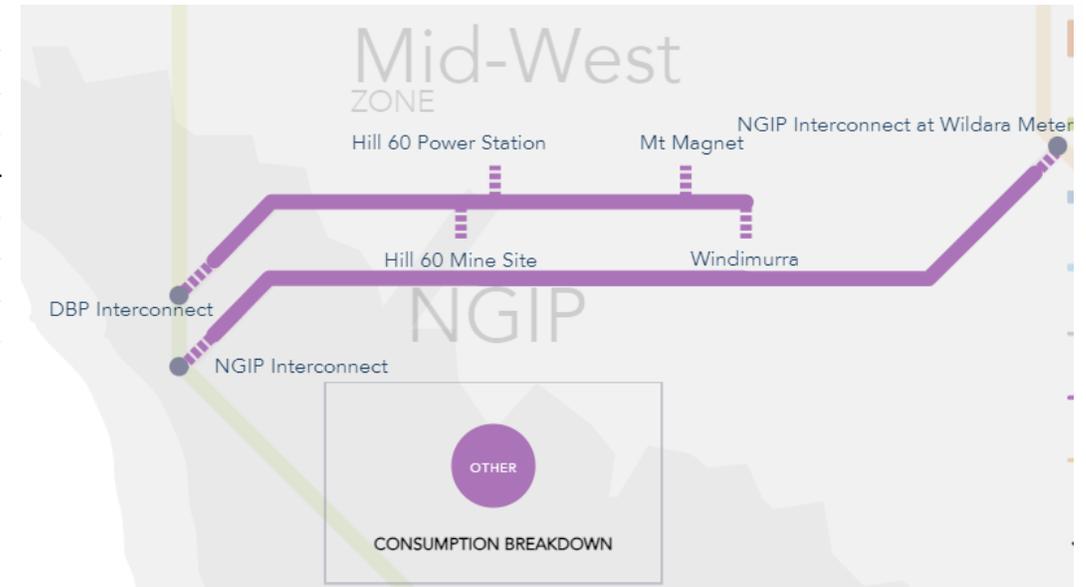
- A Gas consumption in the WA domestic gas market increased by 3.4 PJ (+3.6%) from Q2 2022.
- B Gas production increased by 5.1 PJ (+5.4%) from Q2 2022.

WA gas storage & pipelines

WA gas storage facility injections and withdrawals – Q1 2021 to Q2 2023



Northern Goldfields Interconnect Pipeline



- A Storage flows exhibited a relative stabilisation in Q2 2023.
- B The Northern Goldfields Interconnect Pipeline was registered during Q2 2023.

Questions and Feedback

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