Quarterly Energy Dynamic (QED) Report – Q3 2022

Presented to WA Electricity Consultative Forum

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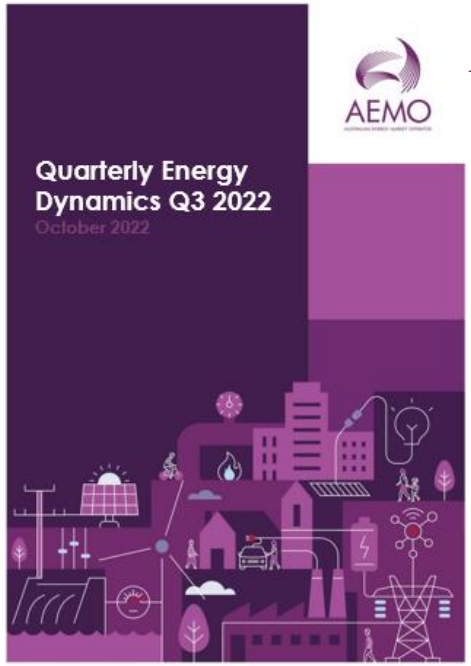
12 October 2022

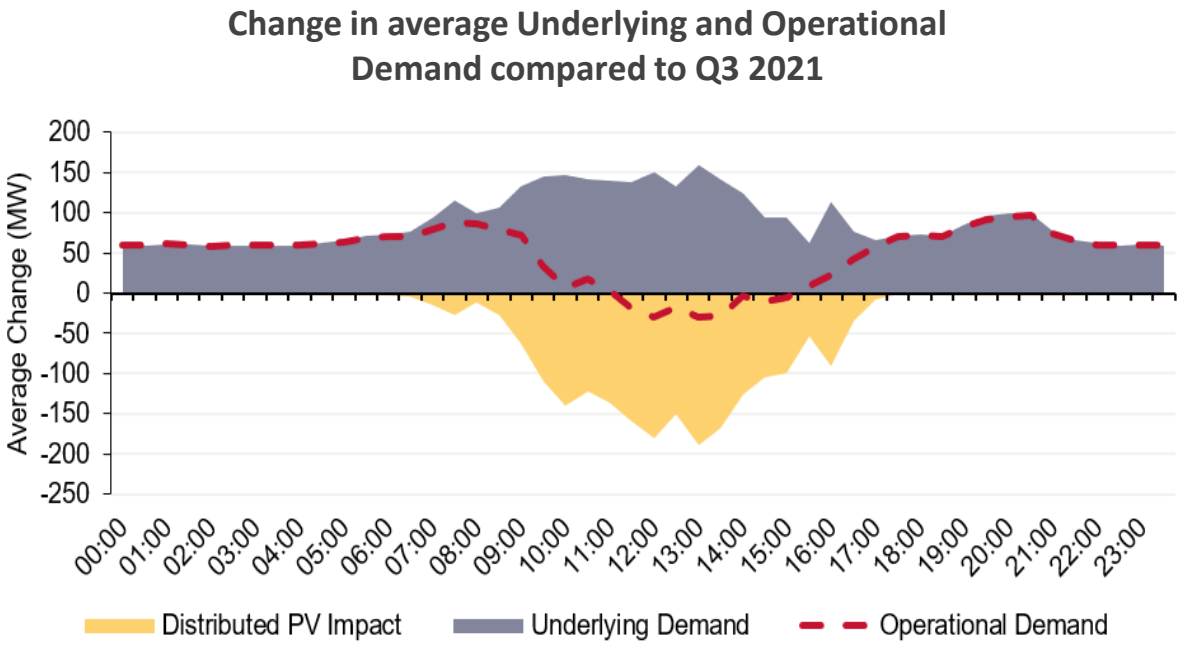
Overview

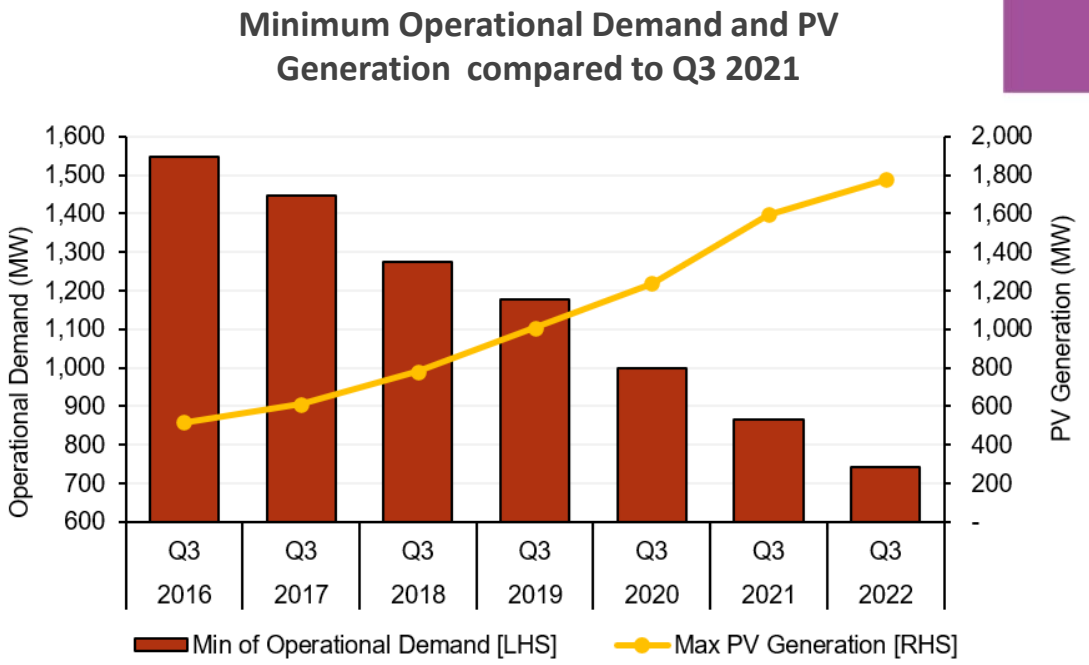


The Q3 2022 QED will be published on 27 October 2022. Key insights include:

- A new minimum operational demand record and a new maximum DPV generation output record.
- Four-year high weighted average Balancing Price and weighted average Short Term Energy Market (STEM) Price.
- A large decrease in coal-fired generation, mainly driven by a reduction in Facility availability.
  - As a result, gas-fired generation significantly increased.
- Increase in gas production and gas demand for electricity generation.

Electricity Demand





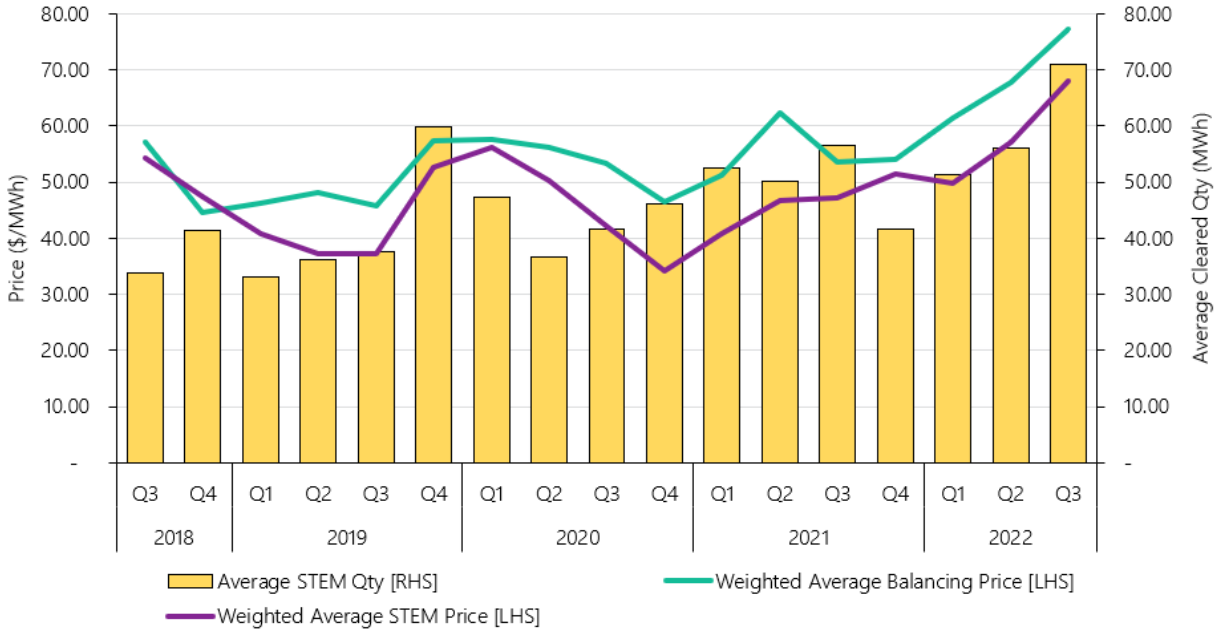
A Increasing Distributed PV (DPV) capacity in the SWIS continues to reduce operational demand during the middle of the day.

B A new minimum operational demand record of 742 MW was observed during the 12:00 hrs interval on 11 September 2022.

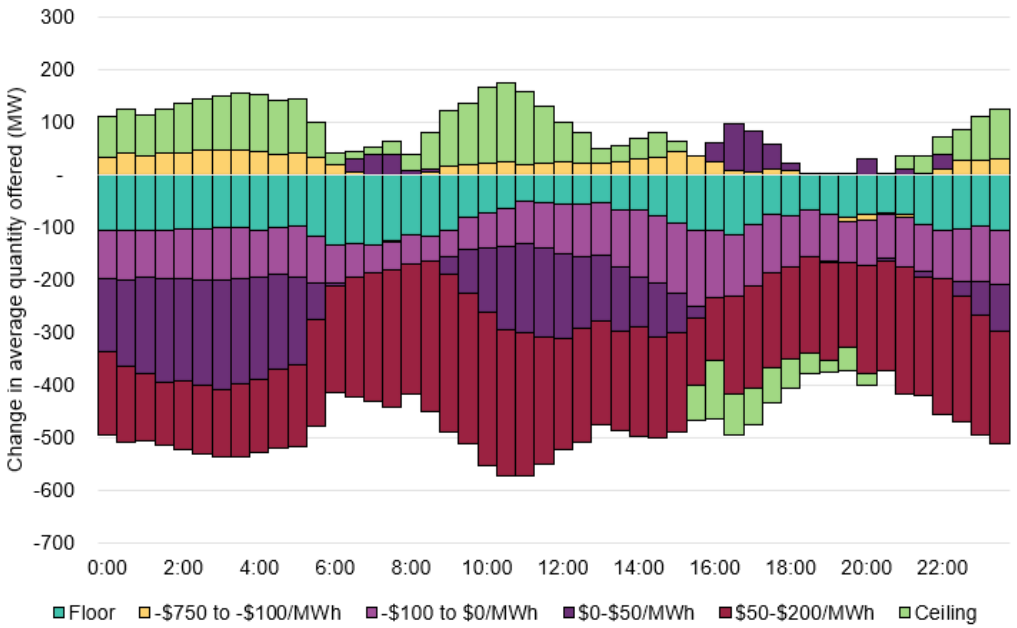
C A new maximum DPV generation output of 1,777 MW was observed during the 12:00 hrs interval on 30 September 2022.

Price Dynamics

WEM weighted average Balancing Prices, STEM Prices and quantity cleared in STEM



Change in average forecast Balancing Merit Order structure by time of day – Q3 2021 to Q3 2022



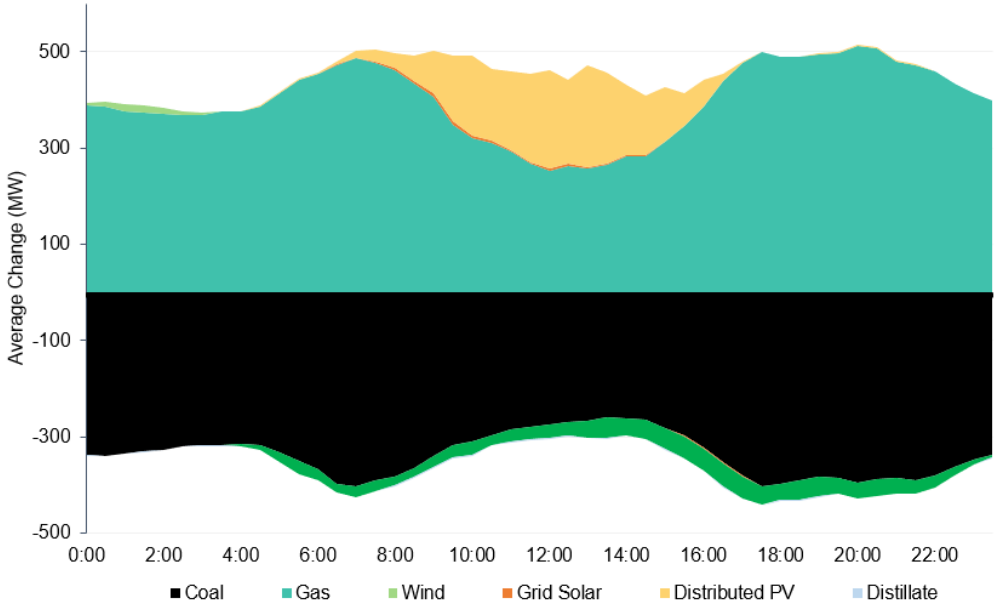
A The weighted average Balancing Price reached a four year high of $77.30/MWh driven by changes in fuel mix and decreased Facility availability.

B On average, there was an overall reduction in energy offered in the Balancing Market, notably at the price floor (<-$750/MWh) and between the -$100 to $200/MWh price bands, with some increase at the price ceiling.

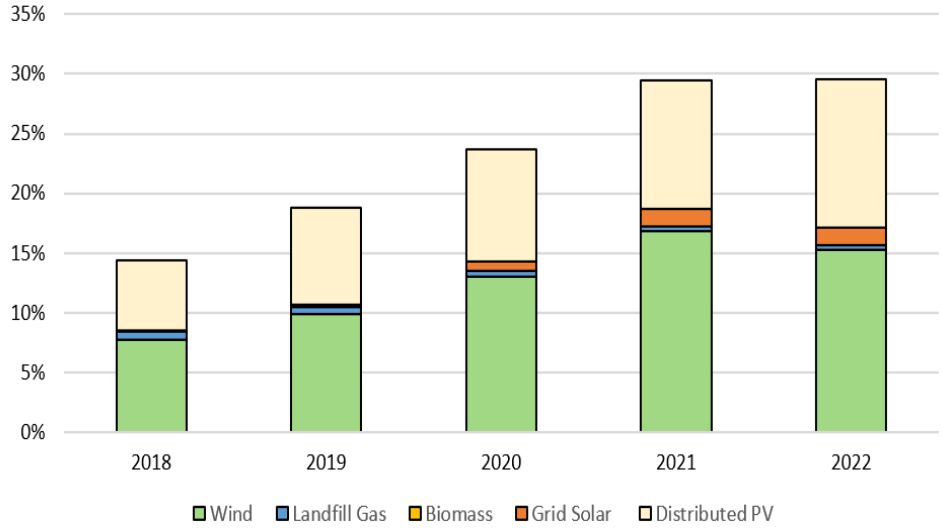
C The weighted average STEM Price reached a 4 year high of $68.08/MWh driven by increased participation in STEM during the quarter.

Change in Generation

Average change in WEM generation by time of day in Q3 2022 compared to Q3 2021



Average Q3 renewable

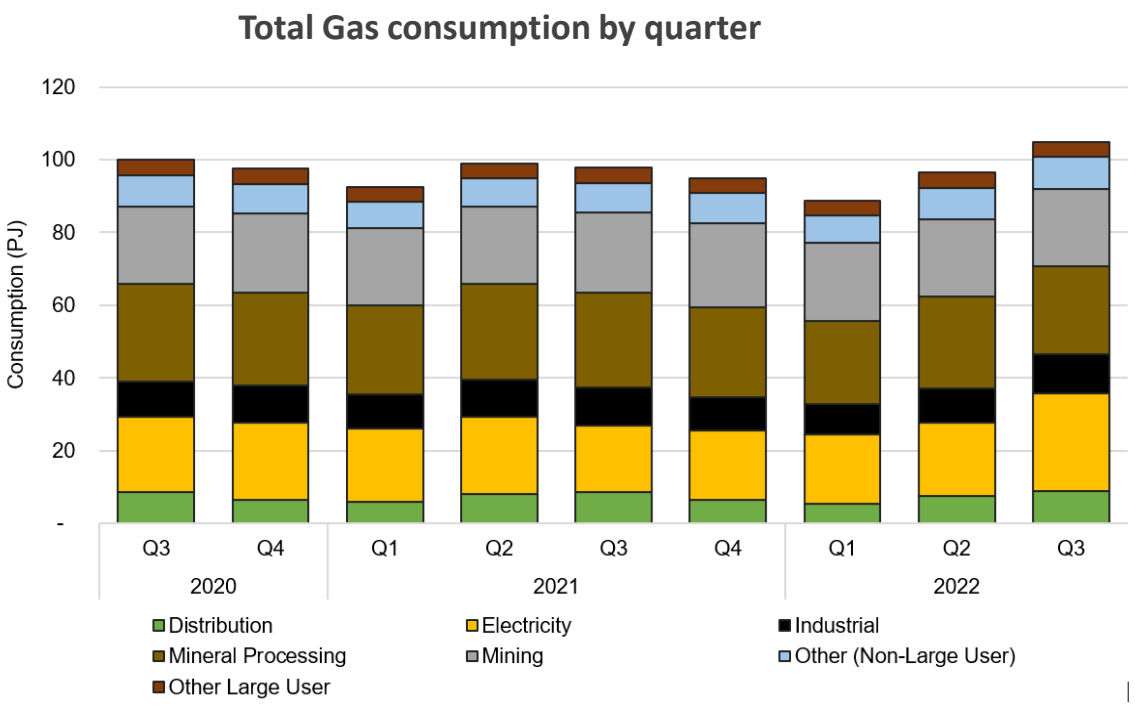


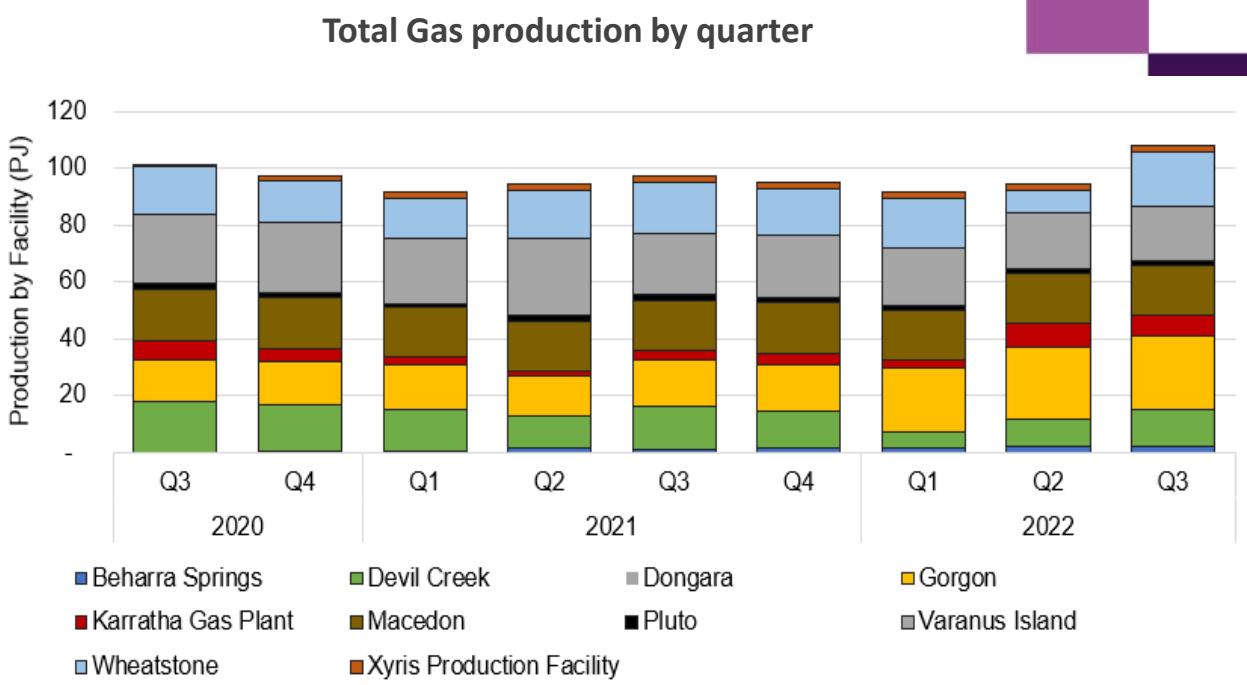
A Driven by reduced Facility availability, coal fired generation decreased by 36% on average, with reduction across all time of the day.

B Gas & Distillate generation increased by 61% on average, with increases across all times of the day resulting in gas generation being the primary fuel every day of the Q3 2022.

C Renewable generation (including DPV) supplied on average 30% of underlying demand during the quarter, a Q3 record.

WA Gas





A Total domestic gas consumption increased compared to Q3 2021 driven by the notable increase (>40%) in gas consumption for electricity generation.

B Gas production increased, largely driven by the return of Wheatstone Production Facility in Q3 2022.

Questions and Feedback

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