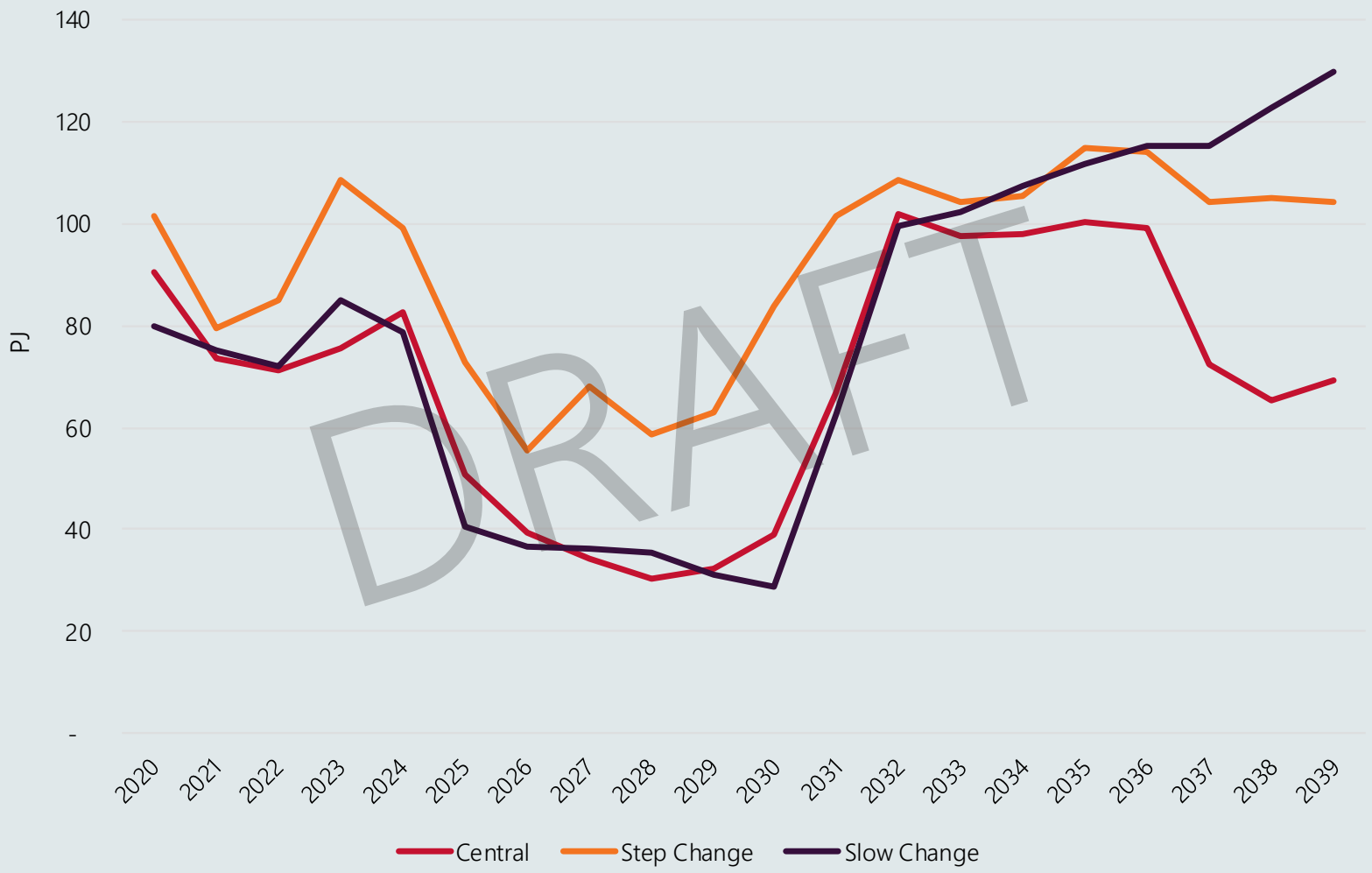
2020 GSOO

Draft 2020 Gas Powered Generation (GPG) Forecasts

Draft GPG forecasts

Central, Step Change and Slow Change scenarios



Variations in forecast GPG consumption across the years is highly dependent on the timing, location and size of new interconnectors being constructed in the NEM, and the generation technology mix, particularly coal retirements. All of these NEM outcomes are based on the draft ISP, published in December 2019.

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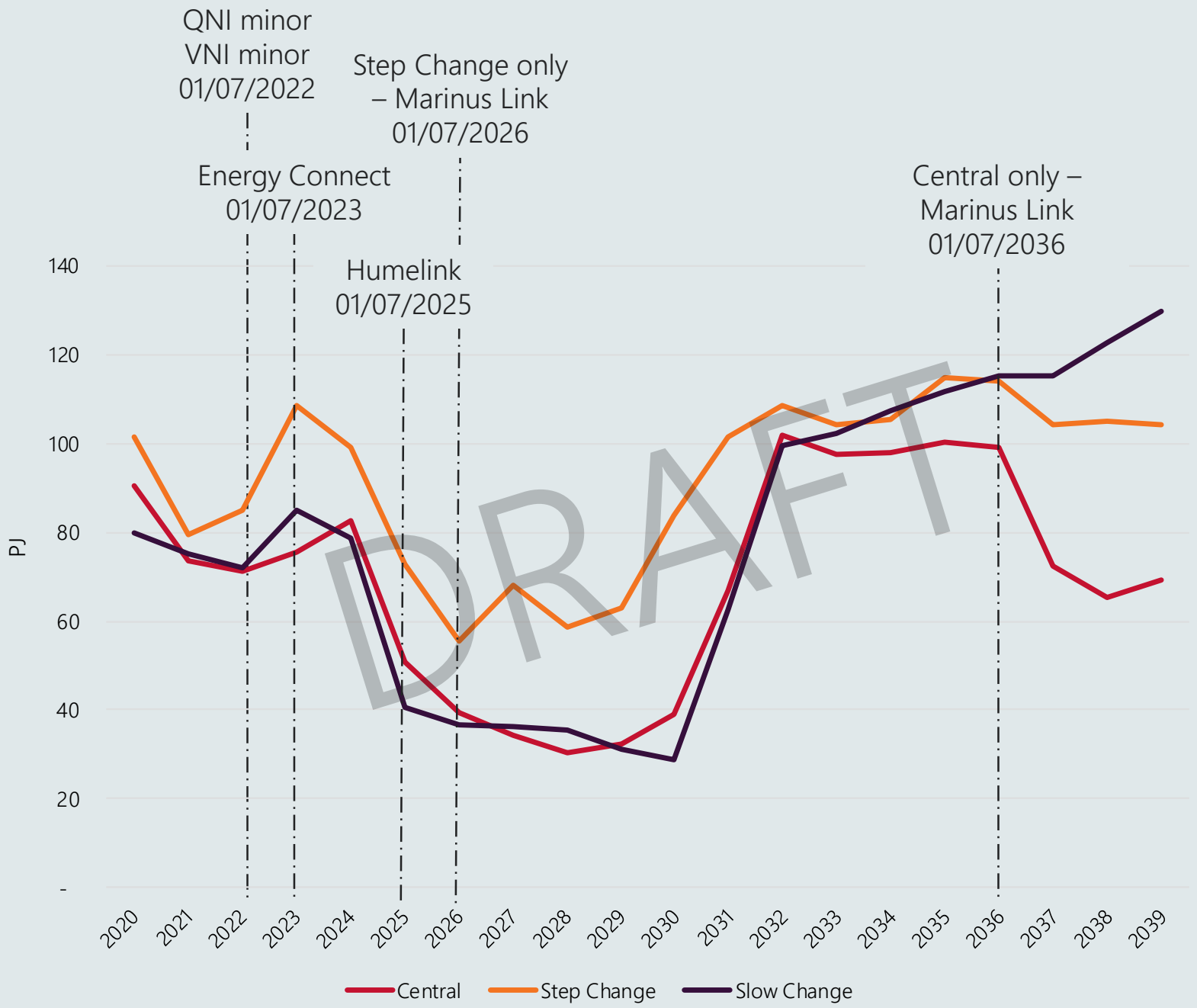
Draft GPG forecasts

Central,
Step Change and
Slow Change
scenarios:
Forecast line builds



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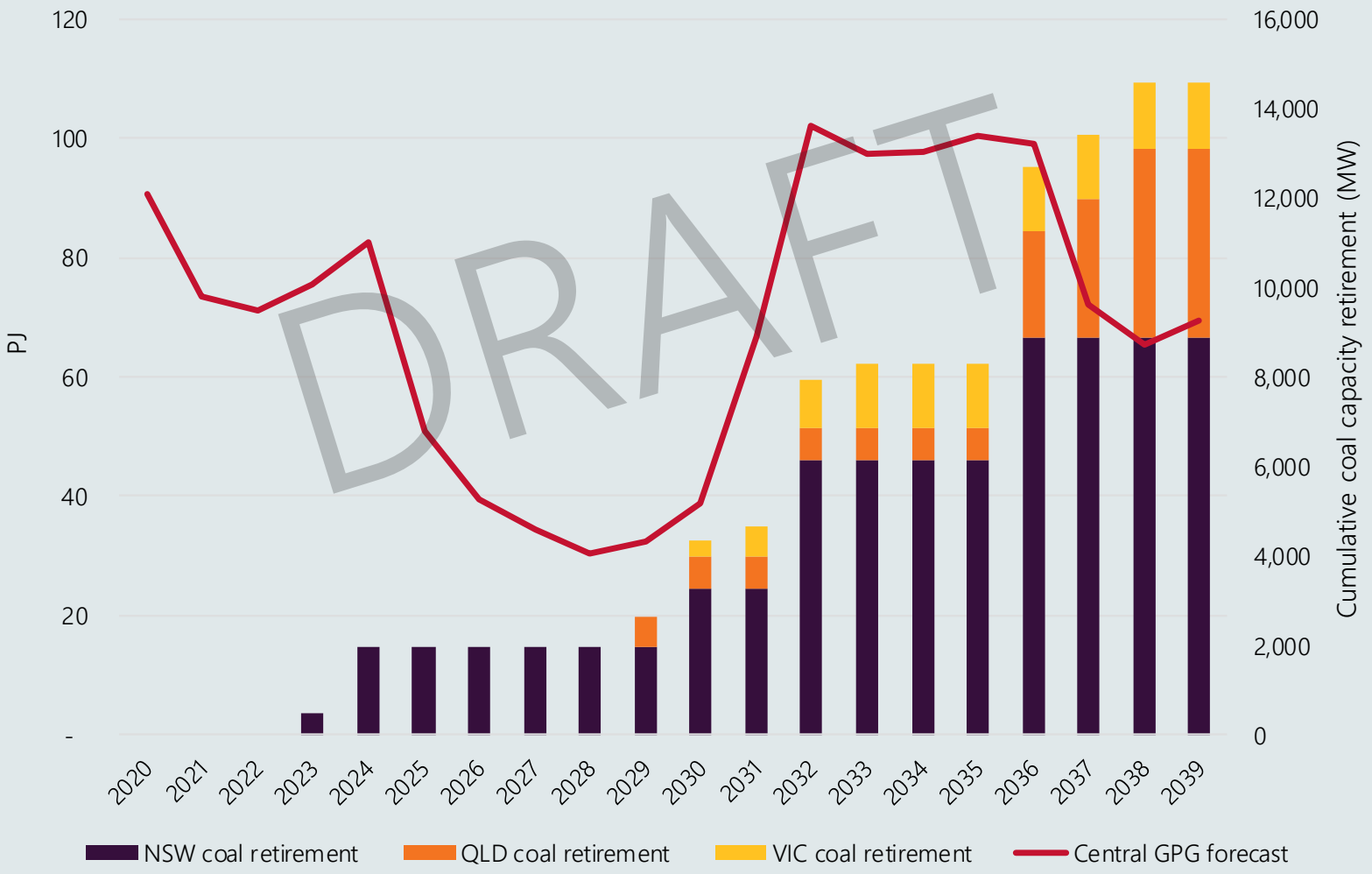
Draft GPG forecasts

Central scenario: Coal retirements



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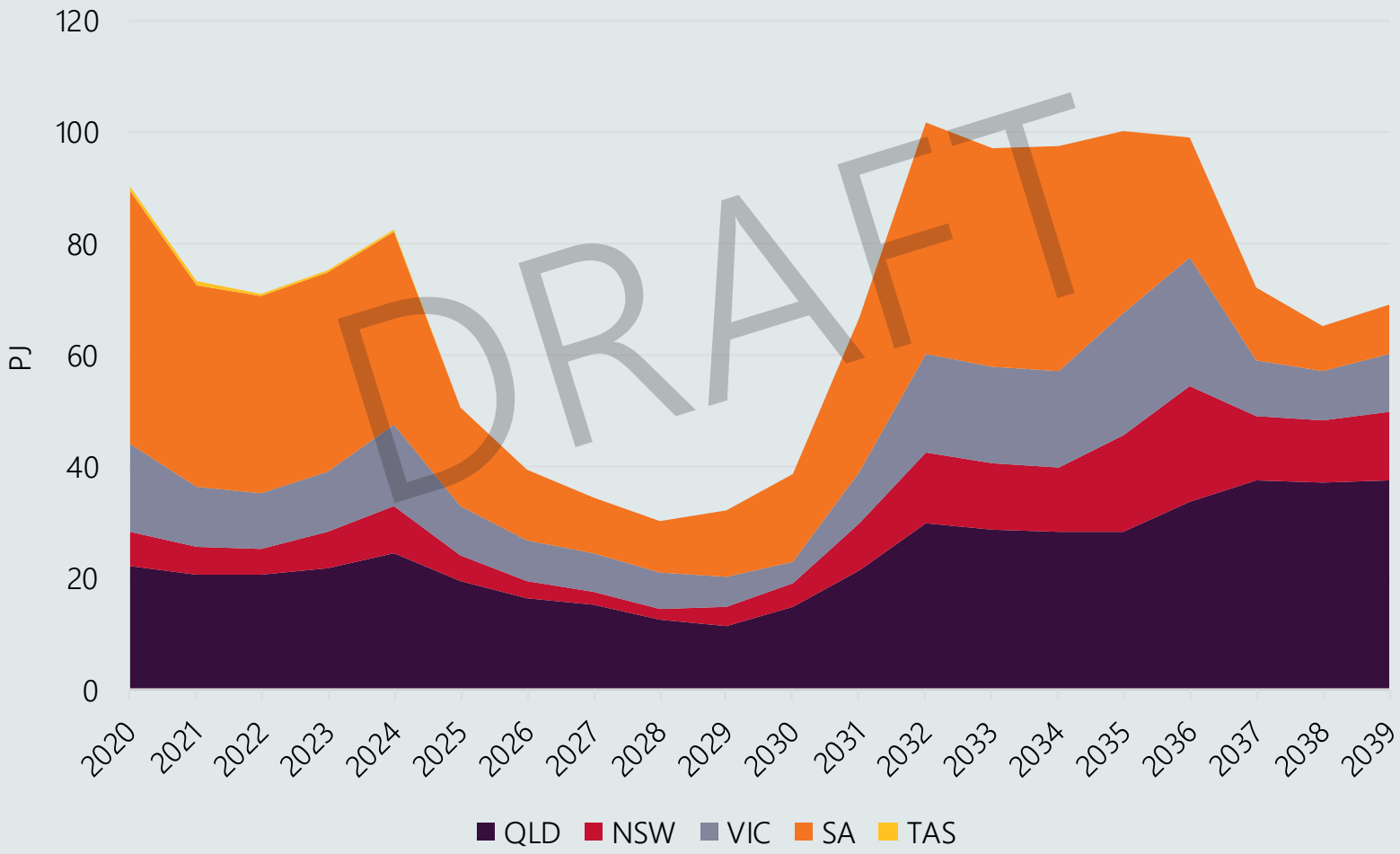
Draft GPG forecasts

Central scenario: By region

Short term SA GPG driven by system strength requirements which reduce after Energy Connect. GPG reduces in all regions to 2030 due to increased NEM interconnection and renewable generation builds.

Long term regional GPG outcomes driven by a combination of coal retirements and interconnection.



Despite Vic and NSW coal retirements, Marinus Link in 2036-37 reduces the need for GPG to be used as firm generation capacity in Vic and SA, with a lesser impact in NSW.

However, QLD GPG responds to the coal retirements in QLD and NSW by ramping up GPG in the long run.

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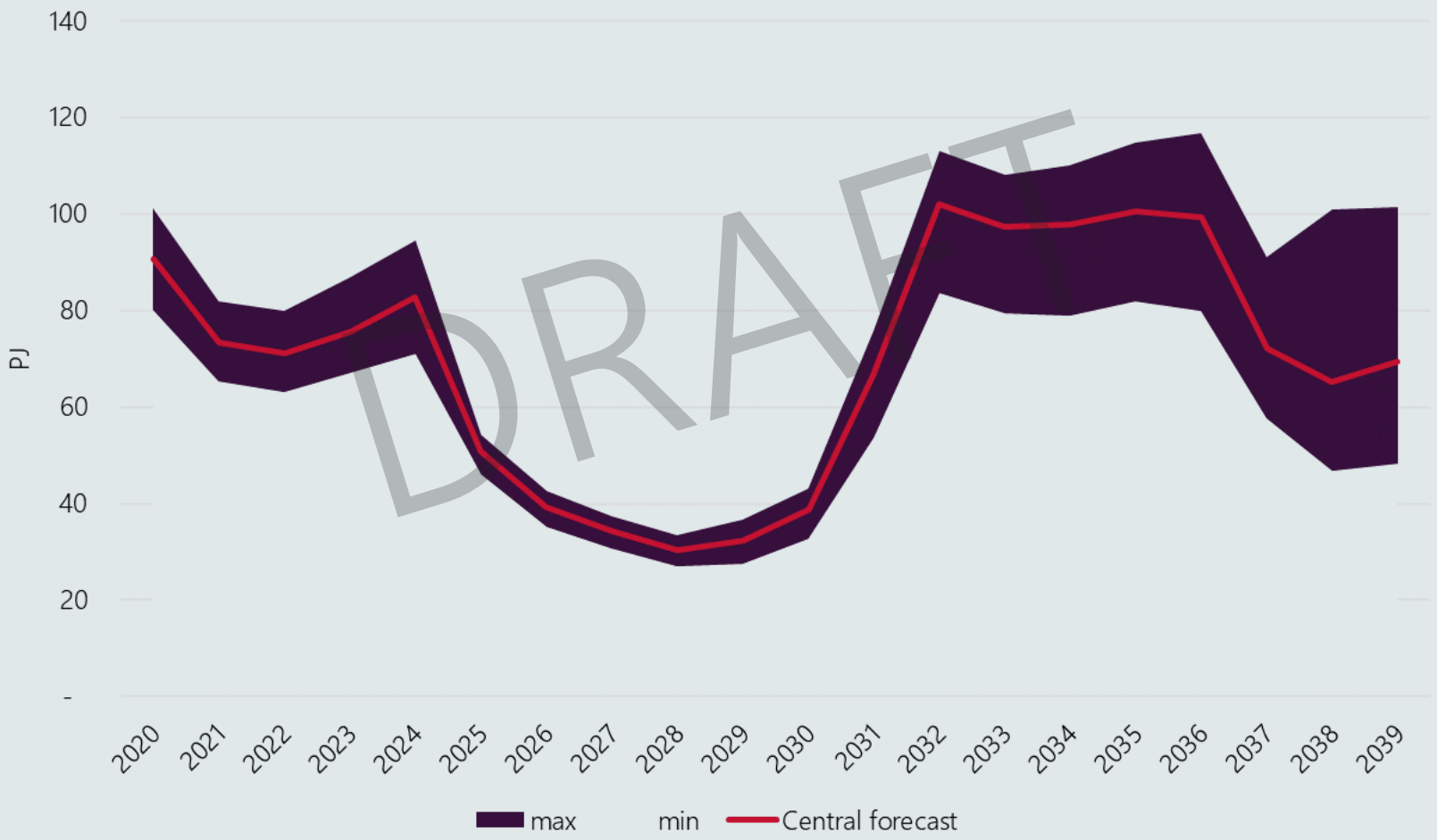
Draft GPG forecasts

Central scenario: Variation by reference years

Year on year variability increases as supply becomes more exposed to vagaries of weather



Note, this is simply the variation in GPG based on historical weather patterns.

As mentioned in the performance accuracy presentation earlier, there was a 60 PJ variance on the GSOO's GPG demand forecasts due to unexpected outages and supply issues so the actual range of GPG variation could be greater than this. Sensitivities will be considered to understand these risks.

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Draft GPG forecasts

Sensitivities to be studied for the GSOO

GPG forecasts are based on expected, system normal conditions. GPG extremes are event driven, not easily forecast.

To capture these in the GSOO, sensitivities can be studied.

- Long term weather conditions
- Unexpected events – eg, long term coal outages
- Interruptions to supply chains – eg coal deliveries
- Any other risks??

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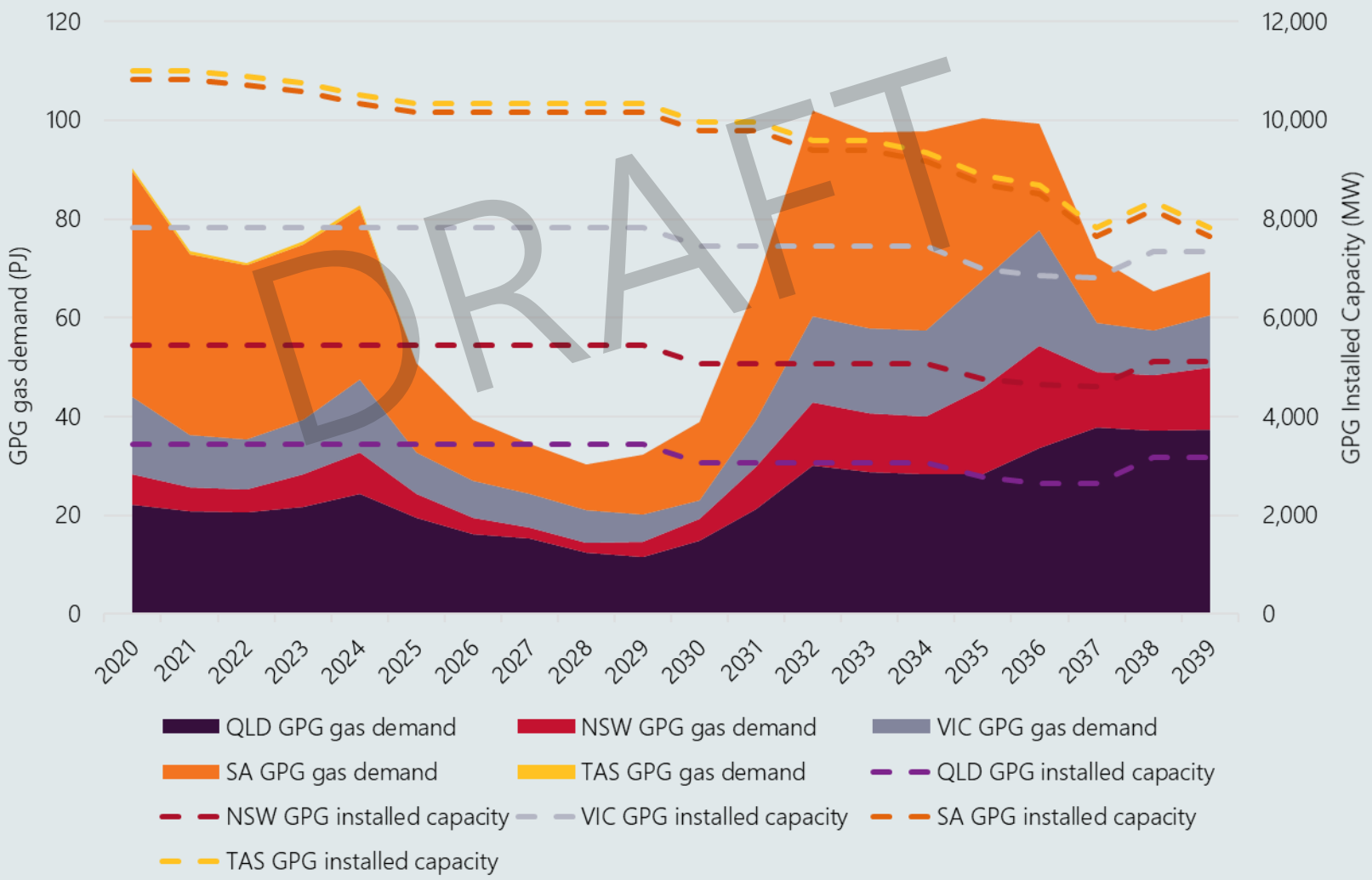
Draft GPG forecasts

Central scenario: GPG demand and GPG installed capacity by region

Demand area and capacity lines are both stacked.

GPG retirements are all based on direct advice from generators and/or the end of technical life for that unit.

Regional breakdowns in the slides to follow.



As can be seen, there is no clear correlation between GPG installed capacity and GPG gas demand. GPG demand is much more closely linked to Interconnector augmentations and renewable generation capacity. See the ISP datasets for more information on both.

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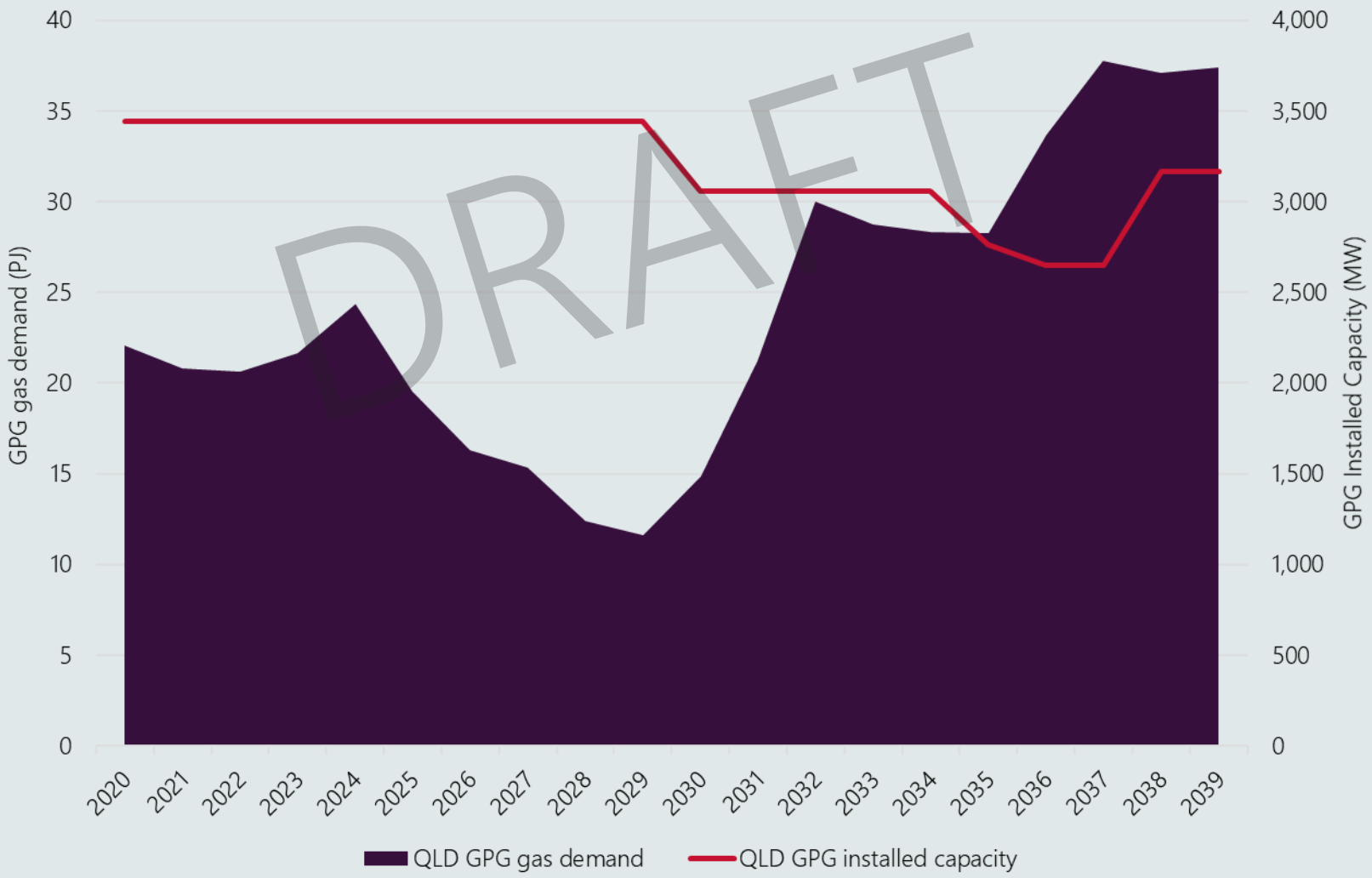
Draft GPG forecasts

Central scenario:
GPG demand and
GPG installed capacity
Queensland



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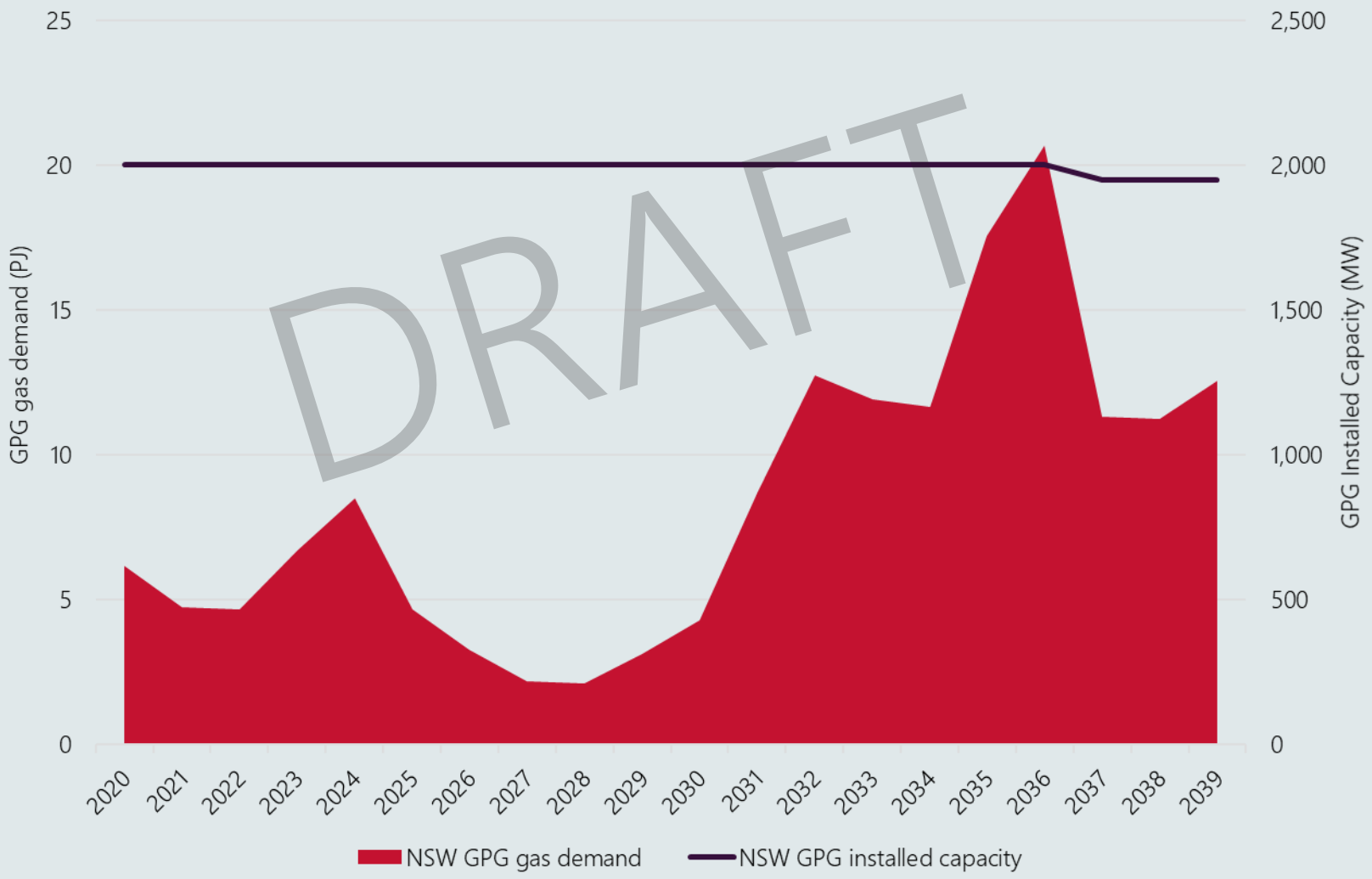
Draft GPG forecasts

Central scenario: GPG demand and GPG installed capacity New South Wales



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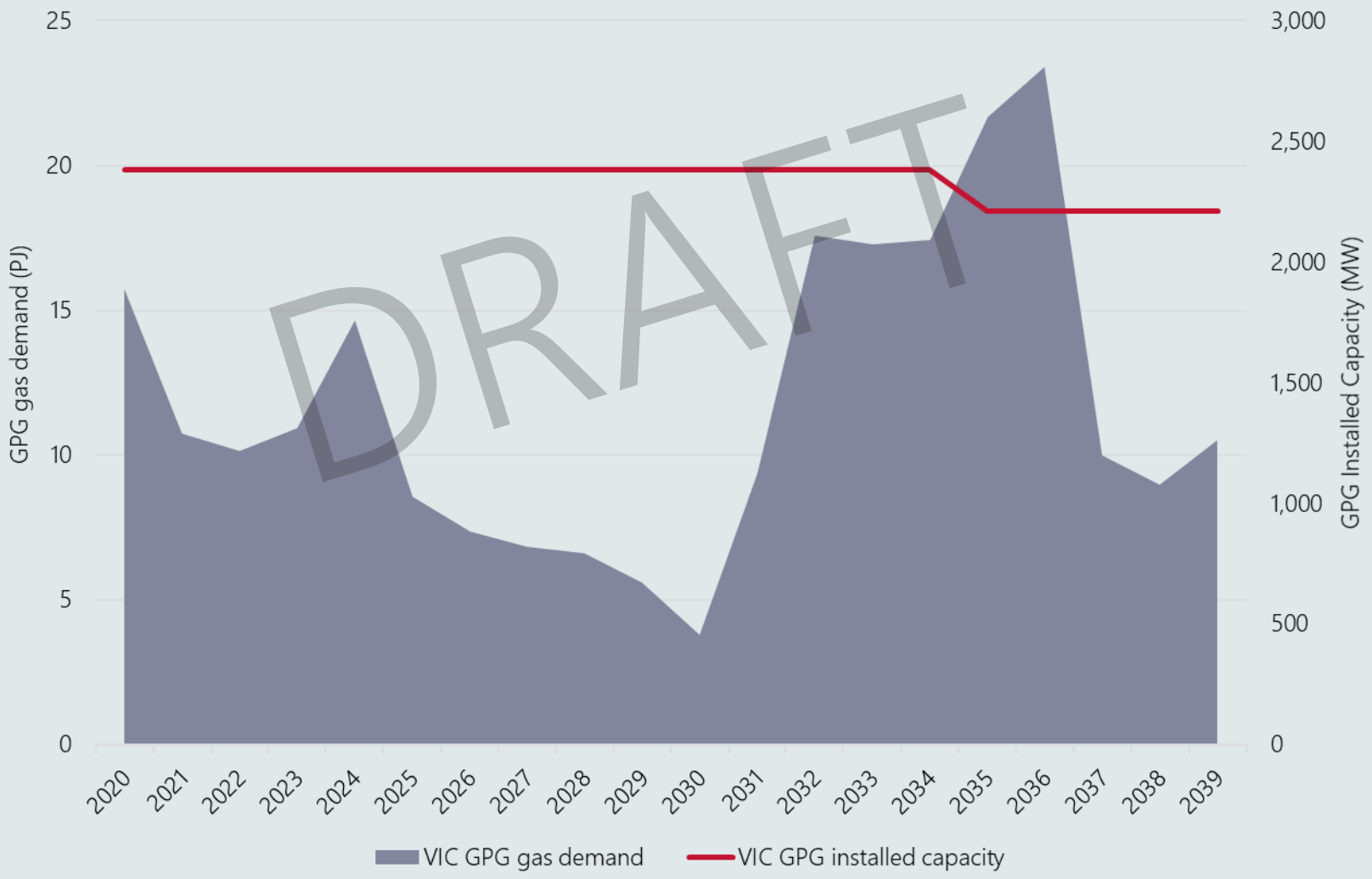
Draft GPG forecasts

Central scenario: GPG demand and GPG installed capacity Victoria



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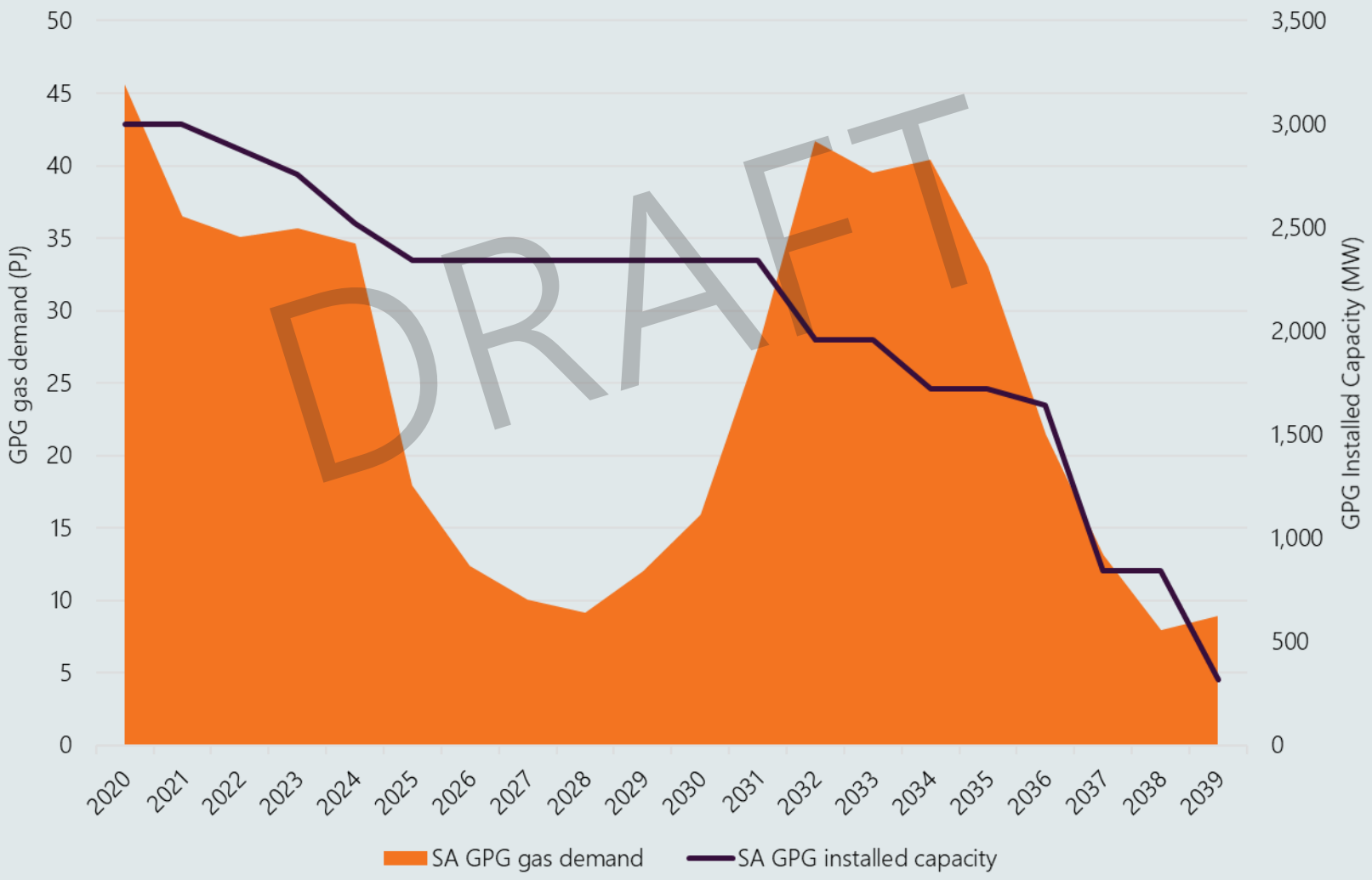
Draft GPG forecasts

Central scenario: GPG demand and GPG installed capacity South Australia



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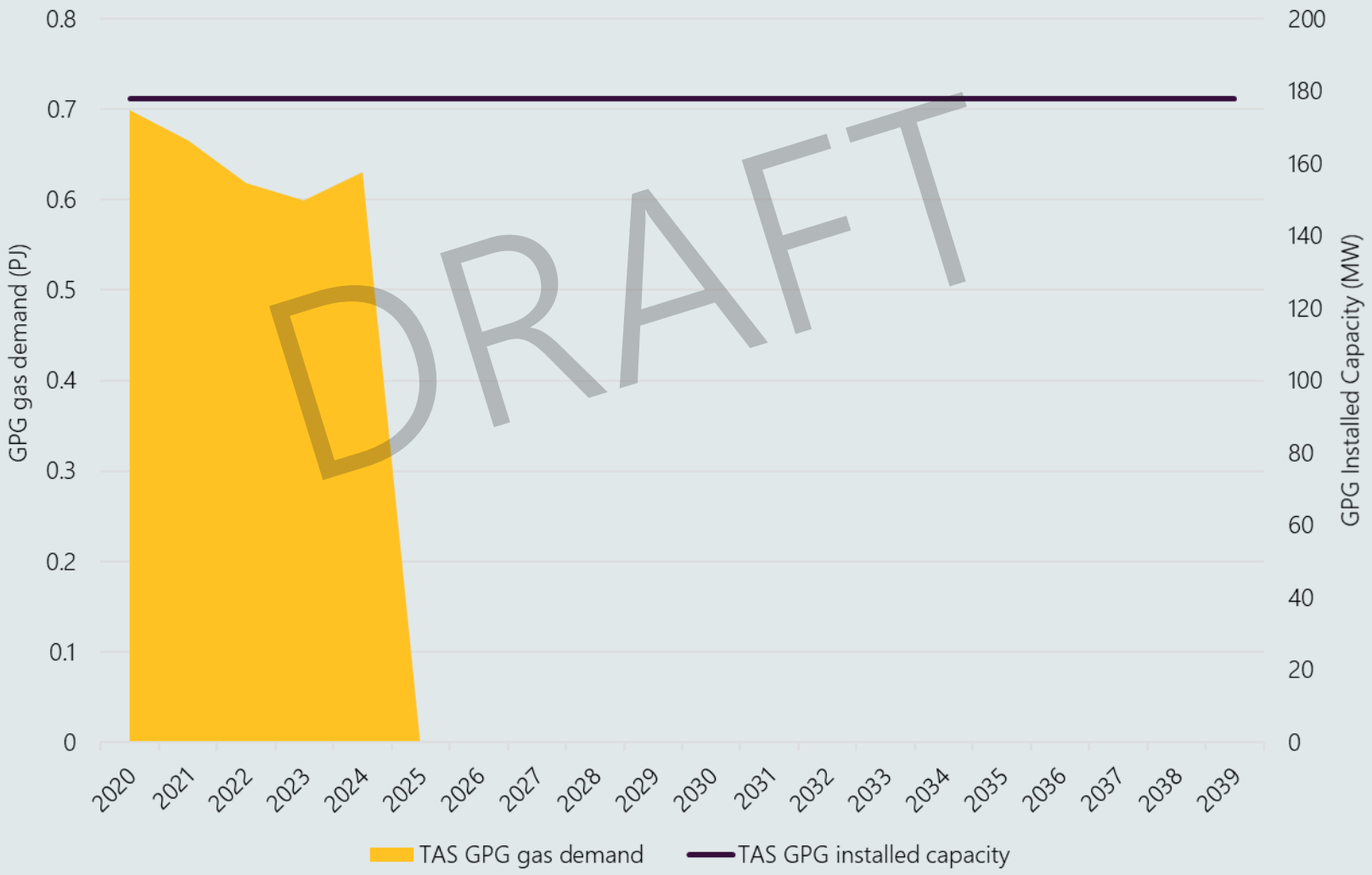
Draft GPG forecasts

Central scenario: GPG demand and GPG installed capacity Tasmania

While it is assumed that Tasmanian GPG remains in service throughout the horizon, it is assumed these GPG units will be held in reserve against any event-driven NEM requirements. (Eg, a Basslink outage or extreme drought, etc).
It is otherwise assumed that Tasmanian demand for GPG be minimal to zero.



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