



# 2018 WA GSOO update

Presented by

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# Five-yearly review of the WA GSOO – progress on action items

## SUPPLY

Engaged external consultant to refine internal potential gas supply model.

Conducting additional analysis and discussion of prospective supply projects.

## DEMAND

Further disaggregation of demand forecasts by region/usage category.

Developing a new method to represent peak gas demand.

## MARKET

Widened view on prospective projects in 2018 formal information request.

Further analysis of historical GBB data to capture recent trends.

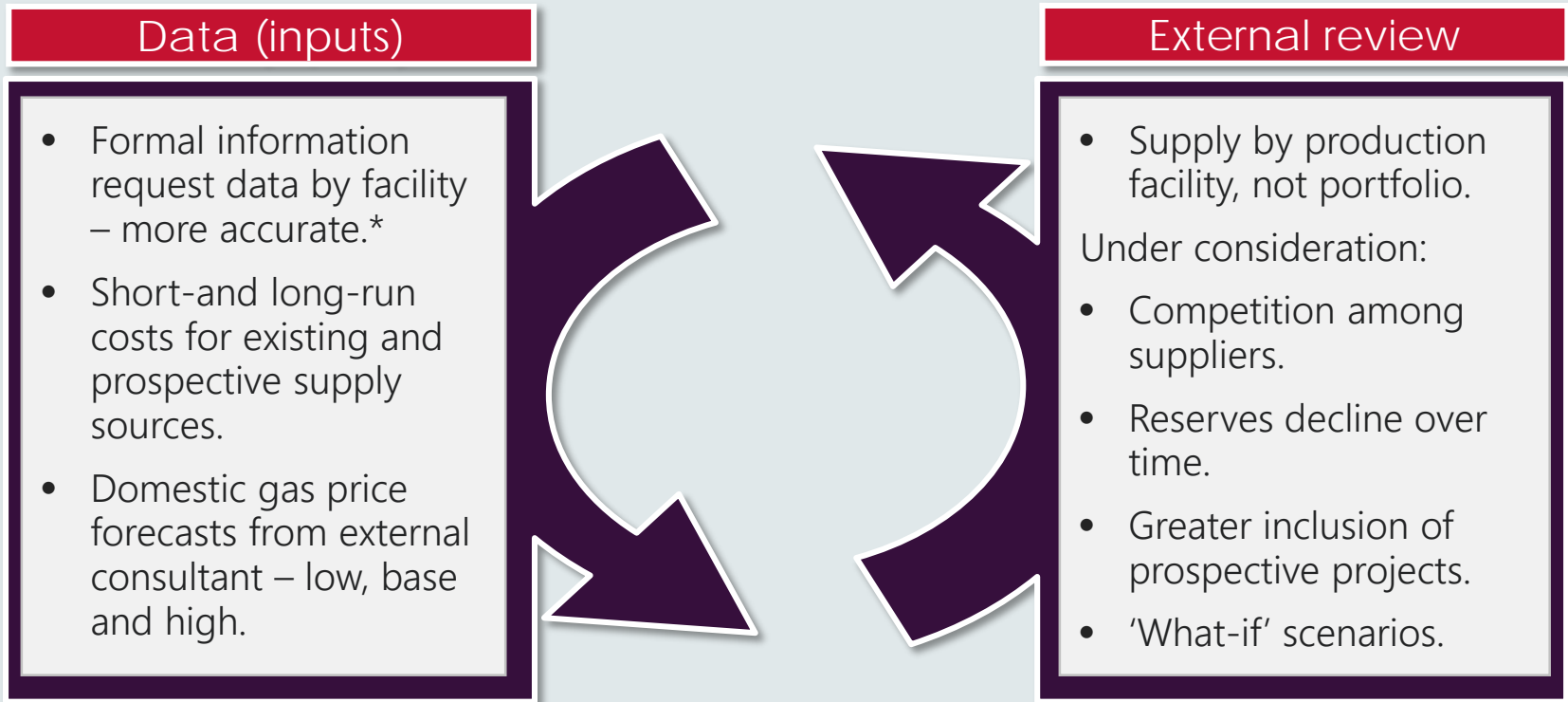
Developing a reference price series to replace domestic gas price forecasts.



# Supply: Potential gas supply model review

AEMO has engaged an external consultant to re-design potential gas supply model.

- Key changes:



\* No confidential data has been provided to external consultant.

# Supply: Assessment of prospective gas supply sources

Assessment will take into account both physical and qualitative features of prospective gas supply sources.

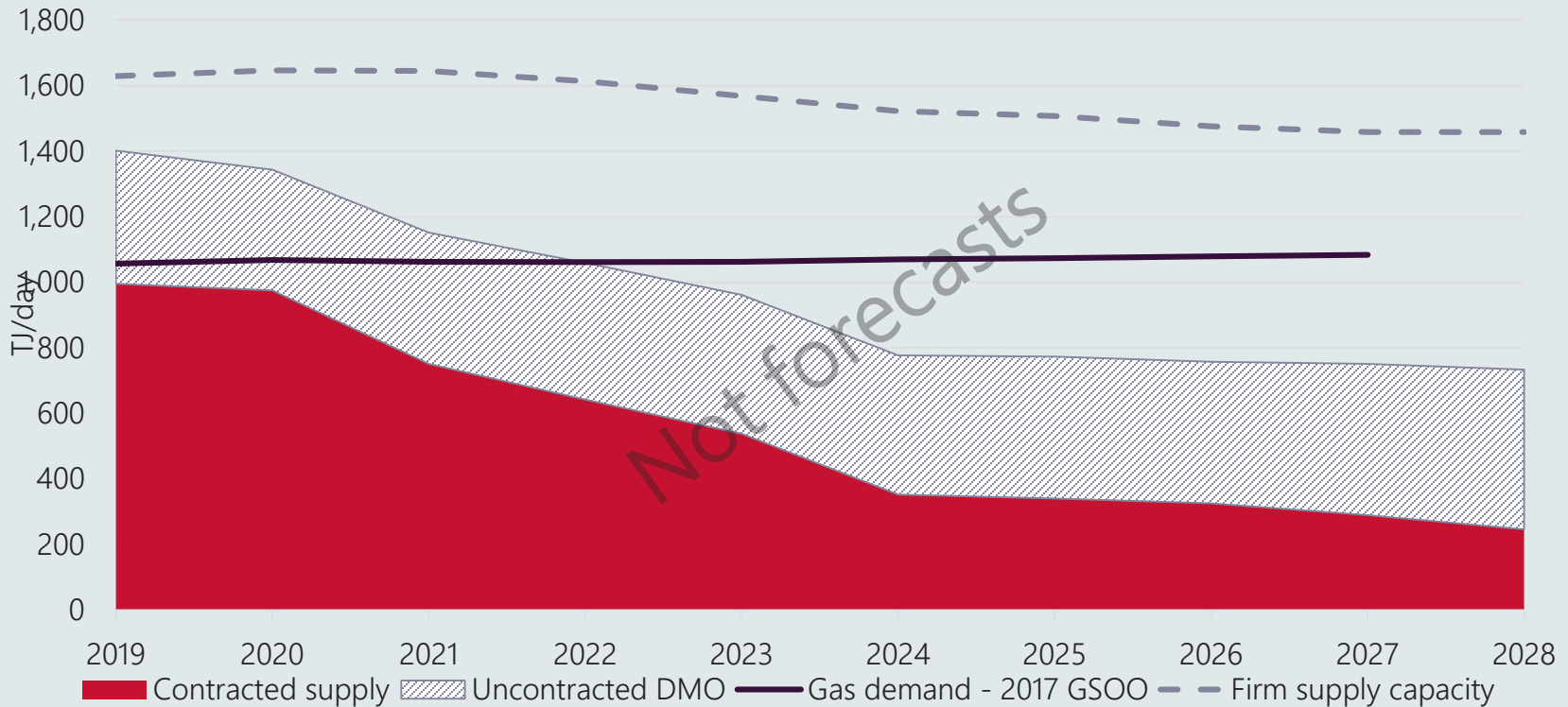
## Physical features

- Likely development path (backfill, new plant)
- Unit cost of development (upstream + midstream, \$/GJ)
- Reserves
- Distance to infrastructure (tie-back, production facility)
- Reservoir characteristics

## Qualitative features

- Proponent experience
- Strategic drivers (e.g. global LNG demand)
- Commercial arrangements (JV, tolling)
- Domestic market obligation

# Supply: Availability based on 2018 formal information request



- Not forecasts, except 2017 gas demand forecast. The 2018 gas demand forecast is under development.
- Contracted supply and firm supply capacity sourced from the 2018 formal information request (FIR) data from existing and some non-Gas Market Participants, ie. not representative of 100% of market.
- Net uncontracted DMO calculated by AEMO using information from DJTSI's website and 2018 FIR data, assuming all is made available from 2019.

# Supply: Additional method for capturing gas supply forecasts

AEMO to present another method to capture gas supply forecasts by following the steps below:

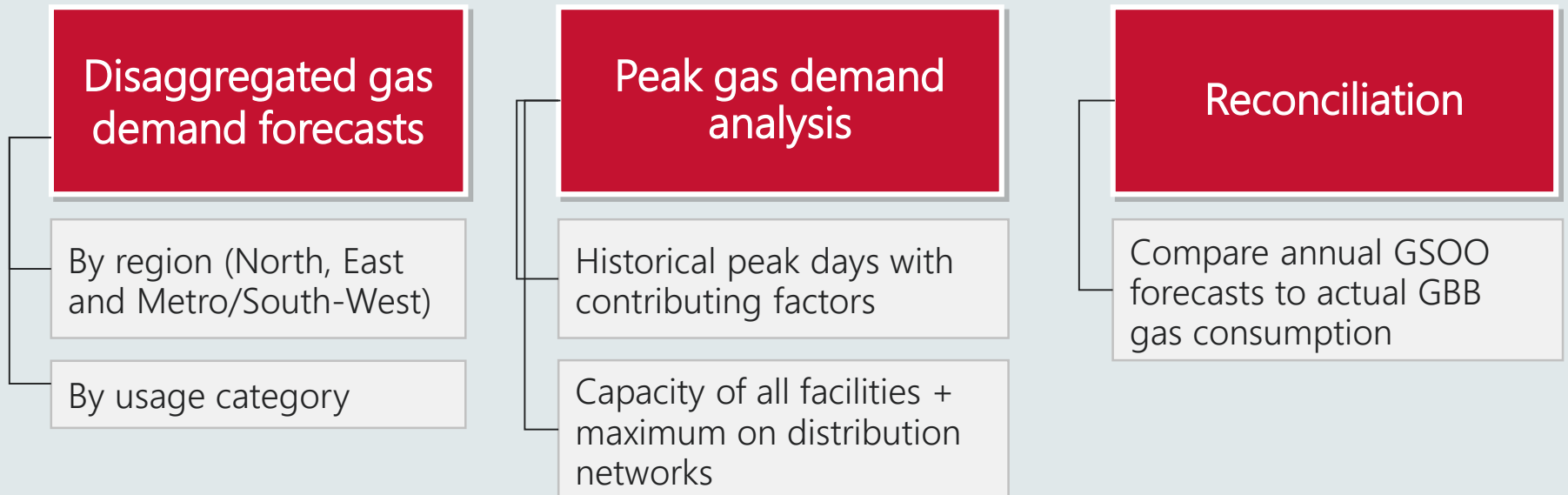
Categorise existing and prospective gas supply sources via physical and qualitative criteria outlined.

Provide visualisation of supply categories stacked in order of likelihood (e.g. operating and under construction, likely, evolving, prospective) under the low, base and high demand forecasts.

Show which supply source categories may be required to meet various levels of demand.

# Demand: Disaggregated forecasts and peak demand analysis

AEMO has engaged external consultant for provision of:



# Market: Additional gas demand and supply forecast scenarios

## Supply

### State domestic gas policy

This scenario will assume:

- All LNG facilities with state agreements offer their full domestic market obligation (DMO).
- DMO volume to be based on the average TJ/day estimation by DJTSI over the life of the project.
- 100% of current obligations to be supplied from 2019.



## Demand

### Impact of renewable energy projects on gas-powered generation

These scenarios (2) will assume:

- Altered assumptions from 2017.
- Changes to the number of prospective renewable projects included and the dates of their commencement to reflect recent growth trends in Australia.
- Allows retirement of existing generation facilities based on age and cost competitiveness.



# Market: Further analysis of GBB data and reference prices

## GBB data

- Examining historical trends since 2013 as compared to more recently:
  - Total flows: seasonality.
  - Gas consumption: flows and changes in share for usage categories, regions and some commodities.
  - Gas storage: injections and withdrawals.
  - Gas supply: flows and changes in share by production facility.
- Results to be published separately on AEMO web site prior to publication of the WA GSOO.

## Reference price series:

- Under development in conjunction with external consultants.
- Further assessment by AEMO on short- and long-run costs for existing and prospective supply sources.

# Key messages for the 2018 WA GSOO

- Positive resources outlook boosts WA gas demand.
  - Strong resource demand (particularly iron ore, gold, nickel, and lithium) is expected to support gas demand growth over the outlook period.
  - Additional 47 TJ/day<sup>1</sup> gas demand to be added to the base demand case and a further 56 TJ/day<sup>2</sup> of prospective projects in the high case.
- Additional supply developments have firmed up.
  - Supply capacity is expected to exceed gas demand over the outlook period, supported by new gas supply sources commencing operation in 2018 (Wheatstone) and 2019 (Pluto).
  - Development progress has been made on several prospective supply sources, including Scarborough and Browse (potential backfill for the Karratha Gas Plant), Equus, and Waitsia.

1. This 47 TJ/day is comprised of (approx.) 25% gold, 60% iron ore, and 15% lithium projects

2. This 56 TJ/day is comprised of (approx.) 5% gold, 50% lithium, and 45% other/unspecified projects

# Key messages continued

- WA domestic gas prices have remained low after falling in recent years.
  - Low domestic gas prices are the result of various factors including the domestic gas reservation policy, increased competition, lower oil prices, and stagnant historical gas demand.
- Renewables growth continues to influence gas-powered electricity generation.
  - Potential and committed renewable generation projects in the SWIS are expected to continue to affect gas demand.
  - Several mine sites have installed solar power and battery storage to offset gas use.
  - Two additional gas demand scenarios have been developed which consider the impact if WA seeks to adopt a 26% emissions reduction target (linear or accelerated trajectory).

# Next steps

Items to be covered at the Oct 9 WAGCF:

- Update on the 2018 WA GSOO development program.
- Results from historical GBB data analysis.
- GBB scoping study.
- In-house gas demand forecasting.
- DJTSI update on WA domestic gas policy.

Please contact [wa.capacity@aemo.com.au](mailto:wa.capacity@aemo.com.au) for any questions.