Forecasting Reference Group Minutes

Forum:	October FRG 2022 (#9)
Date:	Wednesday 26 October 2022
Time:	2:00pm – 4:45pm AEDT

Attendees:

Name	Organisation	Name	Organisation
Ben Skinner	AEC	Dennis Van Puyvelde	ENA
Peter Brook	AEC	Florie Fong	Energy Australia
Alice McLaren	AEMO	Richard Paprzycki	Energy Australia
Andrew Turley	AEMO	Shoaib Amjad	Energy Australia
Ben Jones	AEMO	Sandy Xu	Engie
Chang Liu	AEMO	Adela Gokovi	Ergon
Claus Larsen	AEMO	Kerina Heath	Ergon
Daniel Collins	AEMO	Christina Sutherland	GLNG
Levi Rosenbaum	AEMO	Wenbo Ge	Habitat Energy
Magnus Hindsberger	AEMO	Riadi Tanzil	Hydro Tasmania
Oliver Derum	AEMO	Jack Munro	Iberdrola
Puwasala Gamakumara	AEMO	Mark Grenning	ISP Consumer Panel
Roberta Maher	AEMO	Mark Henley	ISP Consumer Panel
Sayani Gupta	AEMO	Richard Lewis	LGA
Tim Abernethy	AEMO	Chotima Micallef	Lochard Energy
Yee Siong	AEMO	Richard Hickling	Mott Mac
Dominic Price	AEMO Services	Aaron Obrien	Powercor
Gavin Bhorla	AER	Dean Knight	Powerlink
Monami Das Gupta	AER	Linda Yu	QLD EPA
Nick Eaton	ALCOA	Huyen Nguyen	QTC
Suzanne Bentley	ALCOA	Manh Pham	QTC
Jordan McCollum	APGA	Marino Bolzon	SA Gov
Morteza Moallemi	Ausnet Services	Brady Martin	SAPN
Nick Cimdins	Ausnet Services	Elisia Reed	SAPN
Anna Freeman	CEC	Lachlan Hillier	SAPN
Eddie Loew	CleanCo QLD	Connor Mcleod	Shell
Joe Somers	CleanCo QLD	Ron Logan	Shell
Sam Ingram	CleanCo QLD	Noel John Sligar	Sligar and associates
James Foster	CSIRO	Clint Brimson	Synergy
Paul Graham	CSIRO	Jill Trinh	Synergy
Geoffrey Brett	DIESER	Sharon Ang	Synergy
Daniel Burlutsky	DISER	Dhor Ngor-Apuol	Tas Networks
Kim Collins	DISER	Herath Samarakoon	Tas Networks
Lucienne Burnham	DISER	Sharon Raymond	Tas RECFIT
Nicole Thomas	DISER	Mohammad Abdullah	TransGrid
Peter Degorski	DNV	Sujeewa Vithana	United Energy
Caroline Valente	ECA	Katharina Benzler	VIC DELWP
Alex Driscoll	EDEG 2020	Bijoy George	Western Power

Disclaimer

This document provides an overview of the main points of discussion on the October Forecasting Reference Group meeting agenda.

Readers, please note that:

- This document is a summary only and is not a complete record of discussion at the forum.
- For presentation purposes, some points have been grouped together by theme and do not necessarily appear in the order they were discussed.
- The views expressed at the forum and reflected here are not necessarily those of AEMO.

1 Welcome and Introductions

Levi Rosenbaum (AEMO) welcomed everyone and covered the following:

- Publication of 31 August draft FRG minutes.
- Submissions can be made to Energy.forecasting@aemo.com.au.

2 Presentation 1 – Draft 2022 gas price forecasts (LGA)

Richard Lewis (LGA) presented LGA's draft 2022 gas price forecasts, using the same methodology as 2021[1].

Key topics raised by stakeholders during this session included:

- Ron Logan (Shell): Will finance access for new gas developments become a significant issue?
  - LGA: Access to finance will be a significant issue to gas supply, but there are no related assumptions in the model. This may increase gas costs and subsequently prices if access to finance was not forthcoming.
- Ben Skinner (AEC): The forecast results seem more moderate than the AER's netback price forecast. Why is netback not fully reflected in domestic prices?
  - LGA: The magnitude of gas that will be under contract during this high price period is unknown. Company revenue reports have shown low domestic revenue increases while export revenue has increased significantly.
- Ben Skinner (AEC): Spot markets respond to marginal rather than average prices How is this information interpreted in other models?
  - AEMO: The Integrated System Plan (ISP) and Gas Statement of Opportunities (GSOO) focus on total system costs rather than marginal costs, and average costs therefore are most important. Marginal prices are most relevant to forecasting wholesale price movements, which AEMO typically does not provide. AEMO will consider whether this methodology obscures more useful insights in future.
- Mark Grenning (EUAA): Why do the forecasts differ by AEMO's scenario if gas suppliers set prices using market power?
  - LGA: The scenarios differentiate the longer term underlying cost, even though market power margins may not differ. Short term prices remain higher in *Progressive Change* due to higher supply costs and less available gas. Reasons for other shorter-term differences between scenarios can be investigated. The report highlights that exchange rates and oil prices will also have an impact on both short-term and longer-term price outcomes.
- Mark Grenning (EAUU): What is the source for commercial and industrial price elasticity?
  - LGA: There are no definitive estimates in Australia for price elasticity. Therefore, LGA uses data accumulated over time, adding assumptions for the current environment. This method has been validated through benchmarking exercises.

[1] Available at: https://aemo.com.au/-/media/files/major-publications/isp/2022/iasr/lewis-grey-advisory-gas-price-projections-report.pdf

3 Presentation 2 – Draft 2022 coal price forecasts

Claus Larson (AEMO) presented AEMO's draft 2022 coal price forecasts, to be used in the draft 2023 Inputs, Assumptions and Scenarios Report (IASR). The draft forecasts are derived from 2021 Wood Mackenzie (for historical long term contracted and non-export-exposed generators) and 2022 estimates from BIS Oxford Economics (for export-exposed generators).

Key topics raised by stakeholders during this session included:

- Ron Logan (Shell): Why is the 6,000 kcal price used instead of the cheaper 5,500 kcal?
  - AEMO: 5,500 kcal price data is not available. Considerations on whether AEMO should add a nominal "handling fee" can included in draft IASR submissions.
- Mark Grenning (EUAA): Should more Queensland generators be price exposed?
  - AEMO: Only publicly available information was used. Detailed information about generator price exposure can be submitted to AEMO.
- Ron Logan (Shell): The underlying forecasts use historical marginal costs and hurdle rates. Is this appropriate going forward, where financing costs will increase?
  - AEMO will investigate financing related assumptions. (Action 1)
- Ben Skinner (AEC): Coal in New South Wales is fungible and transferable, so marginal spot prices, rather than average costs should drive the market price.
  - Ron Logan (Shell): Exported and locally burnt coal are of differing quality and are substitutable. Transport limits and other constraints must be considered too.

4 Presentation 3 – 2022 Forecast Accuracy Report (FAR) and Forecasting Improvement Plan

Magnus Hindsberger (AEMO) presented AEMO's 2022 Forecast Accuracy report, accessing the accuracy of AEMO's 2021 Electricity Statement of Opportunities (ESOO) forecasts. The proposed forecast improvement initiatives presented will be formally consulted on when the report is published, expected in December.

Key topics raised by stakeholders during this session included:

- Wenbo Ge (Habitat Energy): All the unexplained 'red lights' occurred for demand forecasting, has this pattern been investigated?
  - AEMO: Supply side variances are easier to diagnose since the data is provided by market participants. Demand inaccuracies can take longer to understand.
- Ron Logan (Shell): Why were network losses high in a mild consumption year?
  - AEMO: Network losses are a set proportion of operational demand. Therefore, under forecasting operational demand caused network losses to be under-forecast too.
- Ben Skinner (AEC): Was the solar PV generation over-forecast due to weather or connections?
  - AEMO: The variance was mostly due to weather. Connections was generally well forecast.
- Ron Logan (Shell): Could opportunistic maintenance because of general low demand be the cause of low generation availability?

- AEMO: Generation availability was lower than expected, but data with the reasons for outages is not available.

- Ron Logan (Shell): Is the range for supply availability the truncated or full modelled range?
  - AEMO: Consistent with the FAR methodology, the rage is the 0.05 to 0.95 distribution.
- Huyen Nguyen (QTC): Does AEMO have suburb level Electric Vehicle (EV) data?
  - AEMO: The EV forecast data is provided by AEMO's consultant at postcode level.
- Ben Skinner (AEC): "Commitment criteria" should consider delayed projects as commissioning delays impact the Retailer Reliability Obligation.
  - AEMO: This issue regarding commissioning dates will be addressed in the Reliability Forecasting guidelines and methodology consultation.
- Ron Logan (Shell): AEMO should only be concerned when actuals fall outside the bell curve, not when they fall within 90% or 10% POE levels.
  - AEMO: Unexplainable variances are concerning, regardless of position on the bell curve.
- Richard Hickling (Mott Macdonald): Forecast error can be split into model error and input error. This can help improve the model and guide future input sourcing. It is helpful for the FAR to learn about the performances of AEMO's models and consultant inputs.
  - AEMO: Possible improvements are always welcome for discussion.
- Peter Degorski (DNV): How much of the demand variance is from misunderstanding behaviour compared to other inputs, including weather?
  - AEMO: Currently, solar irradiation is used to determine the magnitude of demand offset by household PV. The proposed improvement initiative is to better understand the behaviour of households with PV, particularly when consumption changes that are not driven by solar generation. This may help explain the rise in winter and summer maximum demands.

5 Presentation 4 – Reliability Forecasting guidelines and methodology consultation

Ben Jones (AEMO) presented an overview and timeline for the Reliability Forecasting guidelines and methodology consultation. The consultation paper will be published on 31 October 2022, followed by workshops on 7-8 November 2022. First stage written submissions close on 28 November 2022 at energy.forecasting@aemo.com.au.

6 Meeting close

The next FRG meeting will be held on Wednesday 30 November 2022, presenting draft Gas Statement of Opportunities (GSOO) forecasts.

Forecasting Reference Group (FRG) Actions Items

Table 1 FRG Action Items (at 24 November 2022)

Item	Date Raised	Topic	Action required	Closing comments	Status
1	26/10/2022	Finance costs	Investigate whether BIS Oxford Economics gas and coal forecasts include assumptions around increased future financing costs.	BIS Oxford Economics assume that global coal supply is equal to global demand. It also reflects a reluctance to invest in fossil fuels, if the long term expectation is for global demand to collapse. BIS OE use publicly available breakeven costs data and transportation costs.	**CLOSED**