Forecasting Reference Group (FRG) DRAFT MINUTES

MEETING: FRG #1 2021

DATE: Wednesday, 27 January 2021

TIME: 2:00pm – 4:30pm AEDT

LOCATION: Teleconference

ATTENDEES:

Name	Company	Name	Company
Carol Tran	AEC	Abu Abdullah	ElectraNet
Abbas Mohammadi	AEMO	Jakes Jacobs	Energy Skills Queensland
Andrew Turley	AEMO	Florie Fong	EnergyAustralia
Bella Pennington	AEMO	Jordan Mill	EnergyAustralia
Ben Tudman	AEMO	Patrick Gan	EnergyAustralia
Cameron Potter	AEMO	Peter Frost	EnergyAustralia
Carla Ziser	AEMO	Ron Logan	ERM Power/Shell Energy AUS
Connie Ganser	AEMO	Mark Grenning	EUAA
Cristina Rocca	AEMO	Christina Sutherland	GLNG Operations Pty Ltd
Dane Winch	AEMO	Jonathan Jorgensen	Hydro Tasmania
Daniel Collins	AEMO	Brent Davis	Jemena
Daniel Guppy	AEMO	John Cheong-Holdaway	Jemena
Dean Soste	AEMO	Stephen Coghlan	Jemena
Debborah Marsh	AEMO	David Headberry	Major Energy Users
Ebby Thomas	AEMO	Elsie Zhao	MGN
Gregory Staib	AEMO	Reinzy Colle	NSW Gov (DPIE)
Joachim Tan	AEMO	Sharon Young	NSW Gov (DPIE)
Keith Ruddell	AEMO	Shira Samocha	NSW Gov (DPIE)
Levi Rosenbaum	AEMO	William Nixey	NSW Gov (DPIE)
Luke Dowling	AEMO	Sarah-Jane Derby	Origin
Matt Marston	AEMO	Dean Knight	Powerlink
Milton Woods	AEMO	Jennifer Brownie	QEUN
Nick Culpitt	AEMO	Marino Bolzon	SA Gov (Energy & Mining)
Nicola Falcon	AEMO	Matt Sherwell	Santos
Siobhan Attwood	AEMO	John Sligar	Sligar and associates
Ashok Kaniyal	AER	Joe Hemingway	Stanwell
Karan Sharma	APPEA	Matt Bowditch	Tas Gov (State Growth)
Ben Ganim	AUS Gov (DISER)	Julie Morrison	TasNetworks
Geoffrey Brett	AUS Gov (DISER)	Prateek Beri	Tas Networks
Jacqui Pham	AUS Gov (DISER)	Daniel Dempsey	VIC Gov (DELWP)
Eddie Leow	CleanCo	Henryk Smyczynski	VIC Gov (DELWP)
Leila Eslami	Department of Industry	Tim Benjamin	VIC Gov (DELWP)

1. Welcome and Introductions

- Forward Plan for FRG Agendas from January to June 2021.
- The Forecasting Approach Register.
- Closed Actions – All 2020 actions are now closed.
- Asked for feedback on the Nov 2020 minutes to be provided by 29 January 2021.
- Open Formal consultations on:
  - AEMO's Inputs, Assumptions and Scenarios Report (IASR). (Now closed)
  - AEMO's Reliability Forecast Guidelines. Second stage submissions close on 4 February 2020. (Action 5.1.1)
  - Electricity Demand Forecasting Methodology Consultation. Second stage submissions open late February 2021. (Action 5.1.2)
  - Submissions to Energy.forecasting@aemo.com.au are appreciated.

Cameron Potter (AEMO) introduced Daniel Collins (AEMO) welcomed everyone and covered the following:
the January FRG presentations about 2021 GSOO.

2. Presentation 1 – Draft 2021 GSOO Consumption Forecasts

Debborah Marsh (AEMO) presented the draft 2021 GSOO consumption forecasts for Tariff V(Residential/Commercial), Tariff D (Industrial) and Liquified Natural Gas (LNG). Debborah outlined the scenario drivers, modelling improvements and how the draft 2021 forecasts differ from 2020 forecasts. Greg Staib (AEMO) presented the accuracy of the 2020 GSOO forecasts; Accuracy was relatively good with 2020 being a cold weather year and incorporating the small COVID-19 impact.

Key topics raised by stakeholders during this session included:

- Mark Grenning (EUAA): Any assumptions around future state gas strategy and net zero emission policies should be clearly stated.
  - AEMO: In general, AEMO models future policies in relevant scenarios when sufficient data is available. In the 2021 GSOO's Slow Change and Central scenarios, only current and committed policies are accounted; these scenarios do not extend current policy or expect future policies.
- David Headberry (Major Energy Users): To ensure there is no overstating of consumption, potential Large Industrial Load (LIL) closures should be included in the central scenario.
  - AEMO: AEMO forecasts include forecast variance due to various drivers across the scenarios it models, including downside risks of closures in different industries. Progression of forecasts over the past four years, shown in Appendix A1 of the 2020 GSOO[1], show that industrial closures are appropriately categorized within the slow change scenario.
- Matt Sherwell (Santos): Has "blue" hydrogen (made from gas) been explored and when will its impact begin?
  - AEMO: The one hydrogen scenario focuses on "Green" hydrogen (renewable generation), with production assumed to commence from 2025.
- Jennifer Brownie (QEUN): What proportion of large gas users are surveyed?
  - AEMO: The LIL survey includes 60-70 of the largest users, covering a significant proportion of industrial gas consumption.
- Jennifer Brownie (QEUN): What drives the drop in small business connections?
  - AEMO: The QLD short-term rate of connections is slightly lower than in the previous year following recent observations in connections growth. However, business connections are expected to increase in the long-term, given the population growth anticipated.
- Jennifer Brownie (QEUN): AEMO and ACCC should have consistent size-based definitions of business categories.
  - AEMO: Following review, the 2021 GSOO will have consistent definitions:

[1] Available at: https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2020/2020-gas-statement-of-opportunities.pdf?la=en

        - > 500 TJ are classed as large industrials,
        - < 500 TJ are classed as small to medium industrials.
    - John Cheong-Holdaway (Jemena): Technology change in the gas industry, including hydrogen and biomethane, may ensure the gas markets longevity beyond net zero carbon emissions targets.
        - AEMO: We would welcome input from industry regarding the potential scale and impact of biomethane developments. Our inclusion of a hydrogen scenario demonstrates we agree that gas-sector decarbonisation is a key consideration in future forecasting.
        - Full economy, multi sectorial modelling is required to understand both international and domestic gas market transitions.
        - The scope of the 2021 GSOO is limited to 2040, so longer term developments may not naturally appear.
    - Jennifer Brownie (QEUN): What hydrogen blend is modelled in the hydrogen scenario?
        - AEMO: The hydrogen scenario assumes an increasing blend, up to 10% in the distribution network, used for residential and small business. The scenario also assumes that some LILs, specifically ammonia, steel and oil refinery industries, may adjust their processes to fuel switch away from gas to hydrogen, in the longer term.
    - Mark Grenning (EUAA): Where are the assumptions behind these blends?
        - The LIL survey asked industries for their potential hydrogen use. Additional assumptions were derived from the hydrogen workshop[2].
        - The assumed 10% blend reflects an assumed level of continued safe operation of appliances without requiring replacement[3]. In this scenario, AEMO has not assumed a continued ramp up in blending; however, some industries are assumed to be able to transition to 100% fuel substitution.

3. Presentation 2 – Draft 2021 GSOO Peak Day Gas Forecasts

Dean Soste (AEMO) presented AEMO's draft 2021 regional peak day gas central probabilistic forecasts, highlighting the main differences from 2020 forecasts.

Key topics raised by stakeholders during this session included:

- Jordan Mills (Energy Australia): Can published data be used to create daily demand forecasts?
    - AEMO develops daily gas consumption and Gas Powered Generation (GPG) traces which are then combined with further components to model annual demand.
    - AEMO values transparency and will follow up on available data. (Action 5.1.3)

4. Presentation 3 – Draft 2021 GSOO Gas Powered Generation Forecasts

Cristina Rocca (AEMO) presented a summary of draft Gas Powered Generation (GPG) forecasts. GPG is forecast to decline but continue to be a critical source of flexibility and system security services.

Key topics raised by stakeholders during this session included:

- Stephen Coughlan (Jemena): Peak GPG days, required to support renewables seems to be missing from the story.
    - AEMO: Aligning peak GPG with peak gas consumption will be addressed in the 2021 GSOO.
- David Headberry (Major Energy Users): Frequency vs volume should also be considered for peaking GPG plants that may seldom be used.
    - Stephen Coughlan: This narrative is important for investment signals.
- Ashok Kaniyal (AER): Has the peak capacity volume been tested against battery cost?

[2] See Presentation 2 in FRG Meeting pack 35 from 30/09/2020 available at: https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/forecasting-reference-group-frg

[3] Hydrogen in the gas distribution networks, COAG Energy Council, 2019, available at: http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/nhs-hydrogen-in-the-gas-distribution-networks-report-2019_0.pdf

        - AEMO: The balance of cost and capability for peak generation is a key focus in the ISP scenarios, incorporating both GPG and storage.
    - Jennifer Brownie (QEUN) & Matt Sherwell (Santos): Does decreasing GPG demand in the hydrogen scenario from 2025 assume that hydrogen will be economical and dispatchable from 2025?
        - AEMO: The hydrogen scenario assumes that flexible electrolysis will complement renewables for peaking LIL demand, reducing the need for ramping GPG.
        - The assumptions do not set a price, rather they assume that hydrogen will be adopted at the assumed rates without consideration of economic interplay.

5. Other Business

During this FRG Meeting, questions submitted on Slido were answered in writing to free up time for discussion rather than questions and answers. AEMO asked for feedback on its effectiveness. (Action 5.1.4)

Key topics raised by stakeholders during this session included:

- Jennifer Brownie (QEUN) requested that AEMO host another hydrogen workshop in 2021 to follow on from the successful initial workshop at the scenario development stage. (Action 5.1.5)

6. Meeting close

The next FRG meeting is scheduled for Wednesday 24 February 2021.

Appendix A Forecasting Reference Group (FRG) Actions Items

FRG Action Items – OPEN (as at 18 November 2020)

Item	Date Raised	Topic	Action required	Responsible	Due	Status
5.1.2	Late Feb 2021	Electricity Demand Forecasting Methodology Consultation	Second stage submissions to RFG Consultation sent to energy.forecasting@aemo.com.au	Participants	13 Apr 2021	OPENING
5.1.3	27/1/2021	Engage with Energy Australia regarding Daily Gas forecasts	AEMO to reach out to Energy Australia to provide information on how available data can be used by participants for daily forecasts.	AEMO	Feb 2021	In Progress
5.1.4	27/1/2021	Written Slido responses	Should AEMO continue to provide written answers to Slido questions during FRG meetings to free up time for Discussion?	Participants	24 Feb 2021	OPEN
5.1.5	27/1/2021	Hydrogen Workshop #2	AEMO to decide whether to host a hydrogen workshop in 2021	AEMO	March 2021	OPEN

FRG Action Items – CLOSED (as at 18 November 2020)

Item	Date Raised	Topic	Action required	Responsible	Details	Status
5.1.1	20/1/2021	Reliability Forecast Guidelines Consultation	First stage submissions to RFG Consultation sent to energy.forecasting@aemo.com.au	Participants	4 Feb 2021	CLOSED