Forecasting Reference Group (FRG) DRAFT MINUTES

MEETING: FRG #6(b) 2021

DATE: Wednesday, 14 July 2021

TIME: 2:00pm – 3:45pm AEST

LOCATION: Teleconference

ATTENDEES:

Name	Company	Name	Company
Lucia Zuniga-Mendoza	AEMC	Aleksander Rinaldo	Energy Queensland
Abbas Mohammadi	AEMO	Craig Pollard	Energy Queensland
Andrew Turley	AEMO	William Zhu	Energy Queensland
Cam Potter	AEMO	Jakes Jacobs	Energy Skills Queensland
Cristina Rocca	AEMO	Patrick Gan	EnergyAustralia
Dane Winch	AEMO	Kerina Heath	Ergon Energy
Daniel Collins	AEMO	Brent Hudson	Essential Energy
Daniel Guppy	AEMO	Zoe Dowsett	Essential Energy
Dean Soste	AEMO	Alanna Gibson	GLNG
Gregory Staib	AEMO	Johanna Bowyer	IEEFA
Levi Rosenbaum	AEMO	Andrew Nance	ISP Consumer Panel
Magnus Hindsberger	AEMO	Richard Owens	ISP Consumer Panel
Matt Marston	AEMO	David Headberry	MEU
Nick Culpitt	AEMO	Stephanie Bashir	Nexa Advisory
Nicola Falcon	AEMO	David Havyatt	NICE
Siobhan Attwood	AEMO	David Xu	Origin Energy
Vivian Mai	AEMO	Shuyi Li	Powercor
Ashok Kaniyal	AER	Vis Visahan	Powercor
Craig Oakeshott	AER	Jonathan Dennis	Powerlink
Morteza Moallemi	Ausnet Services	Jennifer Brownie	QEUN
Nick Cimdins	Ausnet Services	Bret Harper	RepuTex
Sunidhi Sharan	BHP	Marino Bolzon	SA DEM
Owen Pascoe	CEFC	Elisia Reed	SAPN
Thakshila Gunaratna	Clean Energy Council	Ron Logan	Shell Energy Australia
Sam Ingram	CleanCo Queensland	Noel Sligar	Sligar and associates
Paul Graham	CSIRO	Jean Dussaubat	Solar Victoria
Catherine Laurie	DELWP	Steve Meiklejohn	Stanwell
Norman Jip	DELWP	Sharon Raymond	TAS Growth
Will Clarke	DELWP	Herath Samarakoon	TasNetworks
Alex Driscoll	EDGE2020	Jochen Reitz	TasNetworks
Rob Yang	EDGE2020	Sujeewa Vithana	United Energy
Abu Abdullah	ElectraNet	Gavin Dufty	Vinnies

1. Welcome and Introductions

Daniel Collins (AEMO) welcomed everyone and covered the following:

- FRG forward plan July – Oct 2021.
- Forced Outage Rates FRG Consultations submissions closed on 14 July 2021.
- Submissions to Energy.forecasting@aemo.com.au are appreciated.

2. Presentation 1 – 2021 Draft Maximum and Minimum demand forecasts

Vivian Mai (AEMO) presented AEMO's draft 2021 maximum and minimum non-coincident regional Operational (sent-out) demand forecasts. This presentation followed previous FRG presentations, discussions and consultations on various inputs and electrification. The impacts of these forecasts on NEM generation and expected unserved energy will be published in the 2021 Electricity Statement of opportunities (ESOO).

Key topics raised by stakeholders during this session included:

- Craig Oakeshott (AER): Will rooftop PV investment fall once household expenditure shifts from home improvements to pre-pandemic trends, including travel?
  - AEMO: See previous FRG presentations[1] and published reports[2] on Economics and DER. Scenarios explore projections of a range of different growth trend.
- Ron Logan (Shell Energy Australia): Do PV forecasts consider system replacements?
  - AEMO: Yes; see previous DER FRG presentations.
- David Headberry (MEU): Has the ability of the NEM to accommodate electrification of Victorian residential heating for maximum and minimum demand been considered?
  - AEMO: Hydrogen Superpower and Strong Electrification scenarios explore higher energy use by 2030. While increased supply will be required, maximum demand does not increase proportionally with electrification due to the higher efficiency of reverse-cycle ACs than gas heaters. Since minimum demand occurs on mild weather days, there is little weather sensitive load.
- Abu Abdullah (ElectraNet): Is the same electrification rate considered for maximum and minimum demand forecast for SA?
  - AEMO: Electrification is applied as half-hourly, seasonal profile. Due the high temporal granularity of its application it is different for minimum and maximum.
- Abu Abdullah (ElectraNet): Are batteries considered for maximum demand?
  - AEMO: Yes, batteries reduce maximum demand, but the impact only becomes significant after 2030. Virtual Power Plants are not included in these forecasts.
- Craig Oakeshott (AER): Can the dynamic impact of forecast subcomponents on load profiles be published?
  - AEMO: Annual component data and EV traces will be published alongside the ESOO. The ESOO Methodology demonstrates the EV profile evolution over time. Other components, including PV and weather contributions, are too interdependent in maximum demand to identify individual impacts. Presentation 4 in the February FRG[1] shows EV charging profiles both with and without charging time policies.
- Will Clarke (DELWP): Are there any assumption changes in Demand Side Participation (DSP) from 2020 ESOO to 2021?
  - AEMO: The DSP Methodology is unchanged. The May FRG[1] presented draft DSP data, which considers wholesale demand response (WDR). Following discussion with the intending WDR providers, AEMO has adjusted down the expected contribution from WDR compared to the May FRG presentation, to align with what is likely to be registered.
- Ron Logan (Shell Energy Australia): Will AEMO publish data on loads that were adjusted from historical records and the basis for adjustment?

[1] Available at: https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/forecasting-reference-group-frg

[2] Available under "Supporting materials" at: https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/current-inputs-assumptions-and-scenarios

- AEMO: The 2021 Forecast Accuracy Report will explain adjustments. Note that AEMO now publish some adjustments in near real-time[3] on NEMWEB[4].
- Brent Hudson (Essential Energy): How was the impact of increasing PV to decreasing minimum demand calculated? Was the same ratio applied to all states?
  - AEMO: This 0.7-0.8 MW ratio is only an illustrative benchmark. It is representative of the entire NEM and differs slightly for each region.
- William Zhu (Energy Queensland): What are the main drivers for the general sharp falls in minimum demand between the 2020 and 2021 forecasts?
  - AEMO: Slide 8 details the main drivers. The PV forecast is higher than last year at times of minimum demand in all regions besides Victoria.
- Andrew Nance (ISP Consumer Panel): Will these forecasts be used for the 2022 ISP?
  - AEMO: These 10-year forecasts, primarily for the ESOO, will be extended for the ISP time and scenario horizons.
- Craig Pollard (Energy Queensland): Minimum demand forecasts will be significantly influenced by factors which are not so influential today, including battery uptake and EV uptake and charging. Can forecasts include flags to look out for?
  - AEMO: The data will be published with the ESOO; stakeholders can share their analysis and insights. The ISP can report on these insights.
- Johanna Bowyer (IEEFA): What are the energy efficiency (EE) assumptions and how does it impact maximum and minimum demand?
  - AEMO: Maximum demand is mainly impacted by the EE of cooling systems. However, most EE schemes focus on annual, savings not peak. See the EE workshop material[5], the April FRG on EE and the May FRG on consumption[6].

3. Other business

Key topics raised by stakeholders during this session included:

- Ron Logan (Shell Energy AUS): Please improve discussion between FRG participants and only use slido if all questions can be answered to everyone. (Action 5.6.3)
  - AEMO will look to improve discussion at the next FRG.

4. Meeting close

The next FRG meeting will be held on Wednesday 28 July 2021 with presentations on the 2020 Forecasting Improvement Plan update and Electric vehicles.

[3] As per page 9 of https://aemo.com.au/-/media/files/electricity/nem/security_and_reliability/dispatch/policy_and_process/demand-terms-in-emms-data-model.pdf
[4] See: https://aemo.com.au/energy-systems/electricity/national-electricity-market-nem/data-nem/market-data-nemweb
[5] Available at: https://aemo.com.au/energy-systems/major-publications/integrated-system-plan-isp/2022-integrated-system-plan-isp/opportunities-for-engagement
[6] FRG Meeting packs are available at: https://aemo.com.au/en/consultations/industry-forums-and-working-groups/list-of-industry-forums-and-working-groups/forecasting-reference-group-frg

Appendix A Forecasting Reference Group (FRG) Actions Items

FRG Action Items – OPEN (as at 30 July 2021)

Item	Date Raised	Topic	Action required	Responsible	Due	Status
5.5.1	26/5/21	Additional graphs	AEMO to provide a graph on distributed PV generation as a measure of the proportion of potential rooftop PV being realised	AEMO	July 21	In Progress
5.6.1	30/6/21	Transmission outages in the ISP	AEMO will clarify which forced outages are and are not included in modelling for the ISP and reliability forecasting	AEMO	Aug 21	In Progress
5.6.3	14/7/21	Improve FRG discussion	Improve discussion at FRG meetings	AEMO	July 21	In Progress

FRG Action Items – CLOSED (as at 30 July 2021)

Item	Date Raised	Topic	Action required	Responsible	Details	Status
5.6.2	30/6/21	Distributing Slido answers	AEMO to respond to unanswered slido questions	AEMO	Stakeholders can request Slido responses or email questions following the meeting to energy.forecasting@aemo.com.au	CLOSED