

DRAFT MINUTES – Forecasting Reference Group (FRG)

MEETING: #2

DATE: Wednesday 27 February 2019

CONTACT: Energy.Forecasting@aemo.com.au

ATTENDEES:

Attendee	Company	Site
Abe Abdallah	ESCOSA	Adelaide
Craig Oakeshott	AER	Adelaide
Ed White	Ausgrid	Adelaide
James Bennet	SAPN	Adelaide
Andrew Turley	AEMO	Brisbane
Dane Winch	AEMO	Brisbane
Elijah Walker	AEMO	Brisbane
Magnus Hindsberger	AEMO	Brisbane
Nicola Falcon	AEMO	Brisbane
Siobhan Attwood	AEMO	Brisbane
Ali Habibi Khalaj	AEMO	Melbourne
Daniel Guppy	AEMO	Melbourne
Dean Soste	AEMO	Melbourne
Greg Staib	AEMO	Melbourne
Neale Scott	AEMO	Melbourne
Rachael Saw	AEMO	Melbourne
Richard Paprzycki	Energy Australia	Melbourne
Elsie Zhao	Multinet Gas	Melbourne
Panos Priftakis	Snowy Hydro	Melbourne
Alex Fattal	Origin	Sydney
Arindam Sen	TransGrid	Sydney
Alistair Rathie	Alinta Energy	Teleconference
Damian Dwyer	APPEA	Teleconference
James Foster	CSIRO	Teleconference
Lachlan O'Neil	CSIRO	Teleconference
Omid Motlagh	CSIRO	Teleconference
Martin Behan	EDL	Teleconference
Georgina Snelling	Energy Australia	Teleconference
Craig Pollard	Energy Queensland	Teleconference
Maya Muthuswamy	Engie	Teleconference
Ron Logan	ERM Power	Teleconference
Mark Grenning	EUAA	Teleconference
David Headberry	Major Energy Users	Teleconference
Steven Rawlins	Powerlink	Teleconference
Jennifer Brownie	Queensland Electricity Users Network	Teleconference
Matt Sherwell	Santos	Teleconference
Joe Hemingway	Stanwell	Teleconference
Herath Samarakoon	TasNetworks	Teleconference
Billy Atmore-Gray	Vivienne Court Trading	Teleconference
Phil Pollard	Queensland Electricity Users Network	Teleconference

1. Welcome and Introductions

Andrew Turley (AEMO) welcomed attendees to the February 2019 Forecasting Reference Group (FRG) meeting.

2. Previous minutes and action items

The meeting minutes from the 30 January 2019 FRG were accepted by attendees and finalised. All previous action items were closed except the GSOO 2018/19 forecast differences ([Action 14.4.1](#)), which was noted as being included in the upcoming GSOO publication.

Jennifer Brownie (Queensland Electricity Users Network) noted that the QEUN had received communications from AEMO with regards to the previous meeting's action ([Action 14.1.1](#)). The response provided to concerned parties conveys AEMO's position on this issue. The matter is an operational decision that is being dealt with through the appropriate channels.

3. Demand Forecasting Methodology Paper Update

Andrew Turley (AEMO) presented on the *Demand Forecasting Methodology Paper Update* slides (included in the February 2019 meeting pack). The presentation provided a short update to the demand forecasting methodology, including the consultation process involved. The final update is available [here](#).

Key points raised by stakeholders during this presentation included:

- Ron Logan (ERM Power) asked whether AEMO will publish the individual submissions received as part of the consultation process. Nicola Falcon (AEMO) noted that participants were not made aware that their submissions would be made public, and as such privacy may be a concern. AEMO is in the process of acquiring permission from each author to enable release of their submissions. Those who provide permission will have their submissions published as soon as practical.

4. Summer 2018/19 Maximum Demand Preliminary Review

Magnus Hindsberger (AEMO) presented on the *Summer 2018/19 Maximum Demand Preliminary Review* slides. The presentation examined Queensland (13th February 2019 record peak), South Australia (for 24th January 2019) and Victoria (for the 24/25th January 2019 event), and compared observed and counterfactual demand against AEMO's maximum demand forecasts from the 2018 Electricity Statement of Opportunities (ESOO).

Key points raised by stakeholders during this presentation included:

- David Headberry (Major Energy Users) questioned the exclusion of demand-side participation (DSP) from minimum and maximum demand forecasts, with particular focus on responsive load shedding to price spike events. Magnus Hindsberger (AEMO) replied that demand-side participation is forecast separately and serves as an input to the supply model, so it is excluded from the main forecast to avoid double-counting.
- Ron Logan (ERM Power) queried if it was possible to report on the magnitude of demand-side participation for added transparency. Magnus Hindsberger (AEMO) replied that AEMO does publish demand-side participation estimates, with further clarification by Andrew Turley (AEMO) that the 2018 and 2019 assumptions workbooks included all demand-side participation assumptions (volume and price level required to trigger response).
- Jennifer Brownie (QEUN) stressed the importance of modelling 'peak-smart' airconditioning in Queensland and asked how wide-spread these systems were in the NEM. Magnus Hindsberger (AEMO) replied that Queensland is the only state with significant penetration that AEMO is aware of; AEMO is interested in this area and is seeking further information on the topic.
- David Headberry (Major Energy Users) noted that the South Australian Power Networks (SAPN) had received incentives under the AER's demand incentives scheme, and that this may be useful in forecasting demand-side participation. Magnus Hindsberger (AEMO) thanked David for the suggestion.
- Ron Logan (ERM Power) asked if AEMO considers temperature data in Queensland besides the Brisbane weather station, and if humidity or the BoM's 'feels-like' temperature played a role in determining a 'hot day'. Magnus Hindsberger (AEMO) responded that AEMO's operational (short term) forecasts use multiple weather stations in Queensland while the longer term forecast is currently based on a single station.
- Phil Pollard (QEUN) queried if AEMO had recognised the impact of monsoons in the northern Queensland area, particularly the effects on rooftop solar generation as well as on demand loading. Magnus Hindsberger (AEMO) thanked Phil for the question and will seek further analysis. (Action 15.1.1)

- Ron Logan (ERM Power) sought confirmation on whether the maximum demand forecasts were the original forecasts as at 1 January 2019 or the subsequently amended forecasts. Furthermore, concern was raised over comparing the 24/25th January event against the POE10 (1 in 10 year) forecast, as the extreme temperatures may be more analogous with a POE1 (1 in 100 year) forecast. Magnus Hindsberger (AEMO) clarified the amended forecasts presented only had changes to auxiliary loads, and hence all maximum demand forecasts were originals. Nicola Falcon (AEMO) noted that saturation can play a part in extreme temperature analysis on maximum demand, possibly resulting in diminishing marginal increases in demand past the saturation point.
- David Headberry (Major Energy Users), leading on from the previous discussion point, suggested examining temperature saturation when compiling the maximum demand forecasts. Greg Staib (AEMO) clarified that AEMO is currently investigating customer-level response to temperature, and whether the main driver in demand is due to saturation or the frequency of high-temperature events. Daniel Guppy (AEMO) noted that this question on saturation modelling has been posed to AEMO multiple times and in previous reference group meetings. AEMO does not assume a linear relationship between temperature and demand. In 2016 and 2017 the model had a second spline at the top end to account for the different relationship between temperature and demand at that end. In 2018, the model had higher order terms to account for this non-linear relationship. These terms are in the 2018 Forecasting Methodology Paper. Ron Logan (ERM Power) stated that this contradicted the information provided by AEMO at the methodology paper workshop in Sydney (19 February 2019, ISP Stakeholder Briefing and Scenario Exploration Workshop), and if AEMO could publish more information with regards to the temperature/demand relationship. Andrew Turley (AEMO) thanked Ron for the question and noted the request for future methodology releases.
- Mark Grenning (EUAA) asked for clarification on the calculation of counterfactual demand and if this would be provided in a subsequent publication. Magnus Hindsberger (AEMO) explained that counterfactual demand is derived from the amount of impacted consumers and the average consumption per consumer at that point in time.
- Arindam Sen (TransGrid) asked if any analysis had been conducted on New South Wales, as it was missing from the presentation. Magnus Hindsberger (AEMO) clarified that New South Wales will be presented in the Forecasting Accuracy Report update scheduled to be released post summer.

5. Minimum and Maximum Demand Forecast Improvements

Daniel Guppy (AEMO) presented on the *Minimum and Maximum Demand Forecast Improvements* slides. Insight was provided into the process improvements made by AEMO over the last six months, as well as new methods being explored.

Key discussion points during the presentation included:

- James Bennet (SA Power Networks) noted that in South Australia, annual minimum demand will usually occur at any time in September to April, and that the summer/winter/shoulder classification doesn't necessarily matter. Daniel Guppy (AEMO) agreed, and stated there is no bias in the model as to when minimum demand can occur. Nicola Falcon (AEMO) clarified that AEMO previously only considered minimum demand over summer or winter, and is now exploring the shoulder seasons to be as comprehensive as possible when it comes to assessing minimum and maximum demand times.
- Neil Gascoigne (Powercor) asked why weather stations only 10km apart were selected in Victoria. Daniel Guppy (AEMO) responded that the weather station model was a data-driven approach with the constraint that the number of weather stations must be greater than three. The model then selected the stations to minimise out-of-sample forecast error within this constraint. The global optimum solution was only to use one weather station, and hence the model had to be forced to select at least three stations, which happened to be stations close together.

6. Meeting Close

The next FRG meeting is scheduled for Wednesday 24 March 2019.

Forecasting Reference Group (FRG) Action Items

Item	Date Raised	Topic	Action required	Responsible	By	Status
15.1.1	27/02/2018	Monsoonal Impact in Queensland	AEMO to investigate the impact of monsoons in the northern Queensland area, particularly on rooftop PV.	Magnus Hindsberger	24 March 2019	Closed