DRAFT MINUTES – Forecasting Reference Group (FRG)

MEETING: #10

DATE: WEDNESDAY 27TH NOVEMBER

CONTACT: Energy.Forecasting@aemo.com.au

ATTENDEES:

Attendee	Company	Site
Luke Sumner	AEMO	Adelaide
Adam Day	AER	Adelaide
Andrew Turley	AEMO	Brisbane
Magnus Hindsberger	AEMO	Brisbane
Nick Culpitt	AEMO	Brisbane
Ben Skinner	AEC	Melbourne
Ben Jones	AEMO	Melbourne
Greg Staib	AEMO	Melbourne
Nicola Falcon	AEMO	Melbourne
Norman Jip	DELWP	Melbourne
David Hoch	Engie	Melbourne
Helen Wang	AEMO	Sydney
Leslie Lay	AEMO	Sydney
John Sligar	Sligar & Associates	Sydney
Arindam Sen	TransGrid	Sydney
Debborah Marsh	AEMO	Teleconference
Roberta Maher	AEMO	Teleconference
Jacqui Bridge	AusNet Services	Teleconference
Nick Cimdins	AusNet Services	Teleconference
Steve Lindsay	CSIRO	Teleconference
Marino Bolzon	Department for Energy and Mining, SA Government	Teleconference
Bill Nixey	Department of Planning, Industry and Environment, NSW Government	Teleconference
David Havyatt	Energy Consumers Australia	Teleconference
Craig Pollard	Energy Queensland	Teleconference
Khai Chang	EnergyAustralia	Teleconference
Emma White	ERM Power	Teleconference
Ron Logan	ERM Power	Teleconference
Brent Hudson	Essential Energy	Teleconference
Pippa Williams	Hydro Tasmania	Teleconference
Jennifer Abedin	Intelligent Energy Systems	Teleconference
Ju-Ai Ng	Jemena	Teleconference
Sarah-Jane Derby	Origin Energy	Teleconference
Richard Sobey	RES Group	Teleconference
Elisia Reed	SA Power Networks	Teleconference
Joe Hemingway	Stanwell	Teleconference

1. Welcome and Introductions

Magnus Hindsberger (AEMO) welcomed everyone to the November FRG meeting.

2. Previous Minutes, Action Items and Forward Plan

Minutes and action items from the previous FRG meeting were addressed, and the forward plan was discussed.

3. Presentation 1: FRG Engagement in 2020

Nicola Falcon, Magnus Hindsberger, and Ben Jones (AEMO) presented on the proposed role of the FRG in 2020. Topics included drivers for change to the FRG, the role of the FRG in improving accuracy, transparency and industry engagement, proposed updates to the FRG Terms of Reference, and the indicative engagement plan for 2020.

Key topics raised by stakeholders during this section included:

- John Sligar (Sligar & Associates) enquired into how much forecasting is costing AEMO, whether costs have actually been reduced, and whether forecasting accuracy has improved in the four years that the FRG has been running. John also emphasised that it is important to look at the bigger picture and not get too caught up in details.
- Ron Logan (ERM Power) suggested that it would help to notify stakeholders ahead of time about upcoming consultations and to prompt them to send through or prepare ideas. Magnus Hindsberger (AEMO) agreed that, with the busy schedule in the coming months, it would be a good idea to give stakeholders advanced notice of upcoming consultations and that this is part of the purpose of the engagement plan that AEMO will be publishing annually (and update quarterly) as part of the RRO.
- Ben Skinner (AEC) asked whether the “FRG consultation” form of engagement (slide 12) will only seek input from the FRG distribution list and not be made available on the AEMO website. Nicola Falcon (AEMO) confirmed that this is the intention as it is not a formal consultation process, but that there is an open invite for attendance at the FRG. David Hoch (Engie) voiced support for an open invitation, but added that there should be rules of engagement in place to ensure people are adding value to the consultation.
- Joe Hemingway (Stanwell) suggested that FRG participants should have the ability to provide feedback and questions on meeting materials prior to the presentations, as this might allow for a more collaborative discussion during the meeting. Nicola Falcon (AEMO) replied that this was a sensible suggestion, and that there is merit in collating people’s feedback on meeting materials. Nicola also

reminded participants to use the Energy Forecasting inbox for providing feedback, and to identify which agenda item it relates to.

- Ron Logan (ERM Power) emphasised the importance of having sufficient documentation on the justifications for AEMO adopting certain approaches in forecasting, as well as documentation around the outcomes of potential improvements that have been tested. Magnus Hindsberger (AEMO) replied that this is in line with the form of continuous improvement of forecasting methodologies that AEMO is considering.
- Ben Skinner (AEC) suggested that FRGs could be used as an opportunity for the joint, collaborative development of forecasting expertise for both AEMO and the wider industry, rather than just reviewing AEMO's forecasts. Ben suggested that AEMO could talk about new forecasting approaches, demonstrate early snippets of interesting new results, or possibly encourage other participants to run sessions of their own. Nicola Falcon (AEMO) replied that although this would be ideal, AEMO's interpretation of transparency requirements is that there primarily needs to be focus on helping participants understand the justification behind forecasting inputs and methodologies. As such, there is limited time during sessions to balance these requirements with the sharing of expertise. In addition, the Forecasting workshops held twice a year are dedicated to discussing new forecasting approaches. Magnus Hindsberger (AEMO) said that there could be a win-win which serves all purposes where, by engaging participants on what inputs AEMO uses, this can help inform people on what AEMO believes are the best options available and help towards collective learning.
- David Hoch (Engie) suggested the inclusion of pre-reading material (e.g. statistical information and other documentation on forecasting methodology) with the FRG meeting pack to help further collective learning, and design of the FRG agenda to allocate more time to where the biggest returns might be.
- Ron Logan (ERM Power) supported the previous comments about collective learning to achieve the best outcomes, adding that the FRG has a critical role going forward as AEMO's forecasts continue to evolve.
- Ben Skinner (AEC) asked whether the point that the FRG is not a decision making body is an issue under RRO obligations. Magnus Hindsberger (AEMO) replied that the FRG is not a decision making body as such, but a platform for seeking feedback on forecasting inputs and assumptions. It was concluded that the Terms of Reference should be updated to reflect the use of the FRG as a consultative platform.
- Magnus Hindsberger (AEMO) asked participants whether FRG meeting pack distribution should be brought forward to five business days prior to the meeting. Ron Logan (ERM Power) agreed that it should be brought forward.

- Ron Logan (ERM Power) commented that participants should come with an open mind and willingness to contribute, and that discussions should be respectful even if there is disagreement. Nicola Falcon (AEMO) agreed that FRGs should be a respectful two-way discussion between AEMO and participants.
- Nicola Falcon (AEMO) noted that fruitful discussions during FRGs are often cut short due to running out of time, and suggested the "other business" agenda item be extended to 30 minutes as a catch-all to continue discussions. David Hoch (Engie) replied that this is a good suggestion, as if items aren't being closed out, different approaches should be tried.
- Magnus Hindsberger (AEMO) announced that AEMO will circulate an updated FRG Terms of Reference with the next meeting pack (Action 4.3.1).
- Nicola Falcon (AEMO) asked if it is okay for minutes to be circulated with the meeting pack five days prior. Joe Hemingway (Stanwell) replied that five days is ideal, allowing people time to digest the content.

4. Presentation 2: Standing Data Request

Nick Culpitt (AEMO) presented on proposed improvements to the accuracy of summer generator ratings without significantly increasing complexity or burdening participants with complicated data provisioning requirements. Luke Sumner and Magnus Hindsberger (AEMO) also presented on standing data requests.

Key topics raised by stakeholders during this section included:

- Joe Hemingway (Stanwell) asked if the temperature used for analysis is based on the temperature at load centre, as generators are located far away from the load centre, and therefore the load centre based temperature may not correlate with site temperature. Nick Culpitt (AEMO) confirmed that the data is based on the temperature at the load centre, as that is used to determine whether to apply the 10% POE ratings. Nicola Falcon (AEMO) added that forecasting temperature at the spatial resolution of each generator would add large complexity, instead, generators were expected to provide their assessment of capability at their site at the time when temperatures at the load center were at 10% POE levels.
- Joe Hemingway (Stanwell) suggested splitting the load into sub-regions. Nicola Falcon (AEMO) responded that load is currently regional for RRO obligations, but there is merit in considering moving to zonal-level modelling for future ISPs etc.
- Ron Logan (ERM Power) expressed uncertainty as to whether the 85th percentile is reflective of the "average summer day", and suggested this methodology is too conservative. Nick Culpitt (AEMO) responded that it is not conservative, and that it is important to reflect both extreme temperatures and also very high temperatures from a reliability perspective. Ron replied that this does not align with the original intent that the result should capture what plant are available on

the average day. Nicola Falcon (AEMO) responded that in an ideal world, we would have perfect continuous relationship between temperature and derating. But as this is not the case, using just two points AEMO's assessment suggests using the 85th percentile (along with the the capability during 10% POE demand conditions) would best capture reliability risks, otherwise we would be underestimating supply risk. Nicola added that the motivation for this approach is to accurately predict USE, meaning that being conservative at times when USE is not anticipated is not an issue, and this will be made clear in the methodology.

- Magnus Hindsberger (AEMO) said that, for the standing data requests, AEMO will provide additional justifications for the data that is requested, noting that it is a requirement under the RRO that information requested must be needed to produce accurate ESOO forecasts (Action 4.4.1).

5. Presentation 3: CSIRO NEAR Project

Steve Lindsay (CSIRO) presented on current research projects conducted by CSIRO, including weather sensitivity analysis and identifying battery installations. Topics included using the research to help understand usage pattern changes from residential customers, as well as the historical uptake and penetration of battery systems.

Key topics raised by stakeholders during this section included:

- David Havyatt (Energy Consumers Australia) questioned the logic of analysing data at a household-level granularity when AEMO cares more about the aggregated response. Greg Staib (AEMO) responded that the analysis will be a combination of both residential level and aggregated data, and explained that it is helpful to understand household behaviour to observe overall appliance changes over time. Household data can be expanded to a regional level and allows for more generalised observations of trends. Nicola Falcon (AEMO) added that it is useful to see behavioural changes over time to confirm hypotheses at an aggregated level and inform forecasts going forward with respect to trends.
- Ron Logan (ERM Power) asked whether the consumption presented in the comparison charts on slide 6 is total daily consumption. Steve Lindsay (CSIRO) responded that the values represent the contribution of temperature features to daily consumption on specific days (the particular maximum and minimum temperature days), adding that the figures don't account for actual overall consumption as there are other factors involved.
- Ron Logan (ERM Power) asked whether the negative value for winter on the same slide means there is less consumption during hot days in winter. Steve Lindsay (CSIRO) confirmed that this is the case.

6. Meeting Close

The next FRG meeting is scheduled for Monday 20th January, 2020.

Forecasting Reference Group (FRG) Actions Items - OPEN

Item	Date Raised	Topic	Action required	Responsible	By	Status
2.4.1	28/08/2019	Power Station FOM Costs	AEMO to ask power station operators how FOM costs can be adequately modelled during times when units are allowed to sit idle	Luke Sumner	TBC Will report back to FRG once consultation is complete.	**OPEN** Consultation on this is progressing
3.1.2	25/09/2019	Information sharing	Consider developing a mechanism for sharing inbox submissions with the wider FRG group. FRG to provide suggestions to AEMO.	AEMO and FRG	TBC	**OPEN** In interim, have included out of session submissions in meeting pack
3.5.1	25/09/2019	DSP Update – small non-scheduled generation	Investigate whether small non-scheduled generation can be moved from demand forecasting to DSP forecasting.	Magnus Hindsberger	31/1/2020	**OPEN**

Item	Date Raised	Topic	Action required	Responsible	By	Status
3.5.3	25/09/2019	DSP forecasting methodology	Consult on methodology for forecasting DSP, including choice of exclusions (e.g. due to RERT or overlapping programmes)	Magnus Hindsberger	Early 2020	**OPEN**
4.3.1	27/11/2019	Updated Terms of Reference	Update the FRG Terms of Reference	AEMO	13/1/2020	**OPEN** Draft circulated to FRG in December for feedback
4.4.1	27/11/2019	Standing data request – justifications	Provide additional justifications for standing data requests	Magnus Hindsberger	TBC	**OPEN** To be included in documentation of standing data request to be published early 2020

Forecasting Reference Group (FRG) Actions Items - CLOSED

Item	Date Raised	Topic	Action required	Responsible	By	Status
2.3.1	28/08/2019	Generation Information survey formatting	Review the advice given to participants when asking them to provide seasonal availability	Nick Culpitt	TBC – will bring back to FRG when discussing methodology for derating generating units over summer	**CLOSED**