

NATIONAL ELECTRICITY MARKET OPERATING COMMITTEE (NEMOC)

Minutes

Date: Friday 20 March 2020

Time: 10:00AM – 1:00PM (Central Standard Time)

ATTENDEES:

NAME	COMPANY
Ken Harper (Chair)	AEMO
Teresa Smit	AEMO
Ben Skinner	AEC
Tim Lloyd	AusNet Services
Wai-kin Wong	Clean Energy Council
Verity Watson	Energy Networks Australia
Mike Paine	TasNetworks
Andrew Power	TransGrid
Blake Harvey	Energy Queensland
Simon Emms	ElectraNet
Alistair Andrews	Powerlink QLD
Naresh David	Energy Australia

APOLOGIES:

NAME	COMPANY
Gary Edwards	Powerlink QLD
Lillian Patterson	CEC
Rainer Korte	ElectraNet
Dean Sharafi	AEMO

PRESENTERS:

NAME	COMPANY
Babak Badrzadeh	AEMO
Darren Spoor	AEMO
Sujeewa Rajapakse	AEMO

1. Welcome and Introductions

KHarper welcomed attendees to meeting.

2. Minutes of Previous Meeting and Actions

- NDavid noted that his attendance was not on the December attendee list and this needed to be amended.
- BSkinner requested minutes to be updated and published on website. KHarper suggested discussing this under Item 8- Terms of Reference
- Previous minutes were accepted.

- Actions were updated

3. Recent NEM Events

- KHarper discussed the events that have occurred this year.
- Interim reports for the 4 January 2020 event have been published
- The 31st January 2020 event will be published in approximately two weeks
- Full reports on some incidents are still pending. There have been 28 reviewable events this year. This is an increase from last year (14). Due to the high number of incidents, reports are taking longer to finalise.
- Preliminary reports have been done by AEMO Operations team, but the System Design and Engineering team is now responsible for all incidents reports. Luke Robinson/Christian Schaefer should be the first point of call for any queries regarding these.
- BSkinner noted that it had been a busy summer and there are some remarkable events in the provided list, with interest in the event on 20 December 2019 and the challenges on that day. KHarper noted that he will provide details out of session to BSkinner on this after discussions with AEMO Operations Forecasting

ACTION: 19.3.1 KHarper to provide incident listing for each NEMOC meeting going forward

ACTION: 19.3.2 TLloyd to present at June Meeting, lessons learnt on the 31 January event
ACTION: 19.3.3: KHarper to follow up event details of incident on 20 December and report to BSkinner

4. NEMOC Summer Operations Review

- MMiller (AEMO) presented on the NEMOC Summer Operations Review
- Review covered from 1 November 2019 to 15 March 2020
- This report will avoid duplications with other reports by linking relevant documents instead of creating the same information in multiple documents.
- Issues have been identified with this report within AEMO and external parties
- Report is expected to be published by May 2020
- KHarper noted that due to current workload, publication dates may be delayed.
- MMiller noted that participants had requested systems status close to real time
- KHarper noted that was a lot of input regarding Market Notices and the timeliness and if the timings could be improved.
- BSkinner noted the communications channel may need to be reviewed. There is some confusion around the distribution listings of issues like emergency bulletins etc (Whispr etc). KHarper noted that this still needs to be improved and will confer with BSkinner out of session
- KHarper noted that in the summer event, there are rapid changes. Suggestion to publishing PASA to an one hour time frame instead of 2 hourly. Encouragement for NEMOC to change to hourly. More information more often is needed to help with communications with market notices.
- KHarper noted that AEMO is currently doing a split in the data for PASA. Previously the renewables and semi scheduled plant was aggregated. Wind and Solar split will now be provided. Report will be due at the end of the month.
- NDavid noted that data storage and size of servers maybe an issue going forward. KHarper noted that Leanna Tedesco can assist with the PASA project.
- NDavid questioned that with the impact of dust on the transmission network, could connection assets be looked at as well. MMiller noted that this was built around the transmission network but if issues on the connection network, to forward details through for inclusion.

ACTION: 19.4.1 Comments are requested regarding the adequacy of the report by end of March 2020

ACTION: 19.4.2: KHarper to investigate distribution listings for emergencies etc to ensure correct participants receive correct notifications

5. Working Group Updates

5.1 PSMRG

- BBadrzadeh joined the meeting to discuss the PSMRG.
- Noted the impacts with the COVID-19
- System Strength workshop will be delayed until late July
- AEMO will soon publish Systems Strength and Inertia requirements for 2020. Currently working on the inertia requirements for South Australia and System Strength requirements for Far North Queensland which is loosely but not entirely related to constraint that was evoked
- Modelling on load resources have also been discussed. Looking at primarily South Australia and how they have used those modelling outcomes for operational decision-making processes.
- Physical testing of wide area power system has progressed with testing been promising. Testing with Powerlink has continued
- BSkinner questioned if international experts were needed for specialised modelling and if the COVID-19 pandemic has halted plans. BBadrzadeh noted that AEMO are currently using specialists from UK and USA. After consideration of needs for software training, the training date will not be moved. The training on Power System Dynamics has been deferred until June.
- BSkinner noted that the federal government may consider that if there is a need for an international expert is needed for critical service there may be an exception.

5.2 PSSWG

- DSpoor joined the meeting
- DSpoor noted the PSSWG reviewed non- credible contingencies over the last three months. As a result, one minor change to the Bushfire classification framework has been made.
- In the same review, an event on the 30 December 2019, requires NEMOC consideration. Trip of 330KV line between Wagga and Lower Tunit resulting in more than 1000MW to be taken off the system, leaving reserves in a deep LOR2. Consideration is needed as to whether a single credible contingency should be allowed to constrain more than 1000MW of generation noting reliability implications. BSkinner questioned the alternatives. DSpoor noted that there are two viable alternatives; utilising constraints to justify network expenditure and alternatively just relying on network constraints in general to cater for pre-contingent scenarios. DSpoor is questioning whether or not it is viable to have multiple thousands of MW on a single line contingency and if so, current path will follow otherwise it will need to be amended at the network planning stage. BSkinner noted that there was no rule that it can't be justified. It should be a planning question not an Operational question.
- Emergency Communications taskforce discussed as requested by NEMOC. Satellite phones were discussed and frequency. Initial costs have been sorted- \$95,000-\$260,000 for a robust system. Ongoing costs are approximately \$300,000 per annum. Also exploring further interconnecting TNSP phone systems but costings have not been finalised at this stage.
- PSSWG would like to have a NERC presentation at the next NEMOC meeting. Presentation was on the process to ensure Systems Security.

ACTION: 19.5.2.1: Decision from NEMOC as to whether this contingency is an economic and reliability issue or whether it requires operational actions to be applied. Further details are needed.

DSpoor to provide an update with more details at June 2020 meeting

ACTION 19.5.2.2- more details are needed for the communications taskforce as to what is available. Eg. Voice/data etc.

ACTION: 19.5.2.3 PSSWG to present NERC presentation at June 2020 NEMOC meeting

5.3 OPWG

- SRajapakse joined the meeting
- Postponed November 2019 meeting, so report covers the November 2019 and March 2020 meeting
- SRajapakse discussed the Under Frequency Load Shedding (UFLS) review. The UFLS performance observed during recent system events was good. Maintaining adequate synchronous generation to meet system strength requirements and the application of lower transfer limits on Heywood interconnector contributed to this. Further refinements will need to be made
- Implementation of over-frequency generator shedding (OFGS) settings have been completed.
- The Summer Network Outage Planning Guideline used for 2018/19 summer was further refined and used for 2019/20 summer
- AEMO presented the ST PASA redevelopment project
- Improvements to current ST PASA with publishing interconnector limits and generation quantities so that participants can reconcile reserves published.

ACTION 19.5.3.1: any comments for the non-scheduled generation causing systems security issues are to be directed to SRajapakse for comment in first instance

6. Voltage control in the NEM under light load condition

- SRajapakse noted that the report is still in draft form and is looking for guidance from the NEMOC on any areas that need further development and finalisation. An Executive Summary will then be tabled to finalise.
- Key Area is the action register that will be led from the NEMOC review. Once actions have been determined from the NEMOC, OPWG will actively work on the areas determined.
- MPaine noted that comments should be across DNSP as well as TNSP for solutions.

ACTION: 19.6.1 SRajapakse and MPaine to discuss DNSP and TNSP input into document

7. NEMOC/EJPC Risk Workshop outcomes and priorities

- GHD reported on the Risk Workshop held in December 2020
- TLLoyd noted issues are based on each environment, but agreed to accept report

ACTION: 19.7.1: Issues/recommendations to be sent to KHarper by April 2020

8. NEMOC Terms of Reference

- TOC will be tabled at the next NEMOC meeting.
- BHarvey noted that he was involved in the NEMOC via the ENA and CSchaefer (as previous chair) invited him for a DNSP perspective. BHarvey questioned if he needs to be an ENA or Energy Queensland representative on this committee and if there should be other representatives from DNSP's or will it dilute the focus of this committee? SEMms seconded the notion for discussion at the next NEMOC meeting. KHarper will investigate the committee membership and bring back at the next meeting.
- BSKinner noted that there were not any major problems but suggested to show that we have prioritised risks.
- BSKinner noted that all NEMOC minutes need to be published on the website. TOC states that only by exception should minutes not be published on AEMO website. MPaine noted that commercial sensitivity should be considered before publishing. TLloyd questioned as to why they should be published. BSKinner noted that as a member association there needs to be transparency to his member relations. KHarper will review and come back to the committee members by next meeting.

ACTION : 19.8.1 NEMOC TOC and Committee participation to be discussed at June 2020 Meeting

ACTION 19.8.2: Finalisation of TOC by next NEMOC meeting to include decision to publish minutes on website

9. WAMs and HSM project update

- BBlake joined the meeting
- AEMO is currently working with several TNSPs to import continuously streamed data from their PMUs. AEMO is also installing Wide Area Monitoring Software (WAMS) to ensure this data is used as effectively as possible.
- AEMO is communicating with TasNetworks to get a list of their PMUs.
- Issues around system strength and primary frequency control.
- The review is currently investigated by Michael Lyons (AEMO) and is requiring assistance by TNSPs
- BSkinner questioned how the installation of the equipment on the new generators will be funded and is it mandatory. BBlake noted that funding and monitoring is still being investigated at this stage. Phase 1 report will be released approximately June 2020. A further updated will be given after this date.
- BBlake noted that it could take approximately 18 months to have 200+ PMUs

10. AEMO Operations Organisation Chart

- KHarper included the current Operations Organisation Chart

11. Coronavirus Update

- The COVID-19 pandemic has escalated very quickly and AEMO has been handling the arrangements on how to handle this
- AEMO have looked at early information from Italy and Spain relating to lockdown procedures and the impact on demand. Information seems to indicate 5-10% reduction on demand. AEMO are monitoring demand with residential replacing commercial loads. Lower load periods are expected in the next couple of weeks particularly around Easter with system strength and inertia issues being the main focus.
- Planned generator outages are being discussed. AEMO are seeing outages being moved to coincide with parts and labour etc. Outages are moving towards April through to November. Outages maybe extended to make it more liable now to handle the loads for next summer. It puts a risk on the system for Q1 and 2 of 2020 if that work is not completed.
- DSpoor noted that discussions are being coordinated with control rooms and national grid. Control rooms have been locked down and split to ensure social distancing. Processes on cleanliness on handover, cleaning of personal kitchens and toilets and dedicated access for control staff.
- APower noted that Transgrid have implemented similar actions in the control rooms. Voltage Controls have been viewed and outages that may have an impact. One has already been stopped this week, but others will be finished before Easter.
- BSkinner noted that it is concerning with the big outages generators moving to Q3.
- KHarper noted that a number of big outage changes have gone through this week already. Consideration for one in particular needing overseas labour to assist and the need for quarantine periods etc needing to be mandated. Need to keep monitoring the MT PASA. Generators need to communicate any changes to their major outages as soon as possible
- AAndrews noted they are looking at major outages with long recall times to have a delayed start.

12. Other Business

- BBlake stated that they are wanting to use Market Notices for any system normal constraint changes ie. new voltage stability limits or major updates etc. BBlake requested any

feedback/concerns for this happening. BSkinner questioned whether BBlake was mentioning if the Market Notices were acceptable in these changes but noted he agreed it was acceptable form of communication but need a library available as well. AAndrews agreed with a library of constraints were needed as well as Market Notices

- Issues associated with minimum demand and management in particular South Australia will be presented at the June meeting
- VWatson noted that AEMO is doing a Renewable Integration Study and has an international consultant gathering information. KHarper noted that the study will be published approximately the next month and Chris Davies is the key AEMO contact managing this report.

ACTION: 19.12.1. CDavies to RIS update at June NEMOC meeting

ACTION: 19.12.2. JRiesz to present on Minimum Demand June NEMOC Meeting

13. Forward Plan

- Next meeting to be held 19 June in Queensland. Hosted by Energy Queensland

14. Meeting Close