

# **Minutes**

Meeting Title:	Market Advisory Committee (MAC)
Date:	14 March 2018
Time:	12:35 PM – 2:45 PM
Location:	Training Room No. 2, Albert Facey House 469 Wellington Street, Perth

Attendees	Class	Comment
Stephen Eliot	Chair	
Matthew Martin	Minister's Appointee – Small-Use Consumer Representative	
Martin Maticka	AEMO	
Dean Sharafi	System Management	
Sara O'Connor	Economic Regulation Authority (ERA) Observer	
Will Bargmann	Synergy	
Margaret Pyrchla	Network Operator	
Jacinda Papps	Market Generators	
Shane Cremin	Market Generators	
Patrick Peake	Market Customers	
Simon Middleton	Market Customers	
Geoff Gaston	Market Customers	
Steve Gould	Market Customers	
Peter Huxtable	Contestable Customers	

Apologies	Class	Comment
Wendy Ng	Market Generators	
Andrew Stevens	Market Generators	

Also in attendance	From	Comment
Jenny Laidlaw	RCP Support	Minutes
Richard Cheng	RCP Support	Presenter

Ashwin Raj	Public Utilities Office (PUO)	Presenter, to 1.30 PM
Aditi Varma	PUO	Presenter
Fan Zhang	Collgar Wind Farm (Collgar)	Presenter, 1:30 – 2:10 PM
Kristian Myhre	Collgar	Presenter, 1:30 – 2:10 PM
Dean Frost	Western Power	Presenter
Douglas Thompson	Western Power	Observer, to 1:50 PM
Daniel Kurz	Bluewaters Power	Observer
Ignatius Chin	Bluewaters Power	Observer
Matthew Bowen	Jackson McDonald	Observer
Ben Skinner	Australian Energy Council	Observer
Noel Schubert		Observer
Sandra Ng Wing Lit	RCP Support	Observer, to 1:00 PM

Item	Subject	Action
1	Welcome	
	The Chair opened the meeting at 12:35 PM and welcomed members and observers to the 14 March 2018 MAC meeting.	
2	Meeting Apologies/Attendance	
	The Chair noted the apologies and attendance as listed above.	
3	Minutes from Previous Meeting	
	Draft minutes of the MAC meeting held on 14 February 2018 were circulated on 2 March 2018.	
	The Chair noted that a revised draft showing tracked changes suggested by AEMO, the ERA and Synergy was distributed in the meeting papers.	
	Mr Ignatius Chin noted that he and Mr Daniel Kurz were listed in the minutes as presenters but had attended the meeting as observers. The Chair agreed to change the minutes to reflect this.	
	Subject to this change, the MAC accepted the minutes as a true record of the meeting.	
	Action: RCP Support to amend the minutes of the 14 February 2018 meeting to reflect the agreed changes and publish on the Rule Change Panel (Panel) website as final.	RCP Support

### 4 Actions Arising

The closed action items were taken as read.

**Action 19/2017:** Mr Matthew Martin advised that the PUO was still working on the action item but had some further work to do before presenting a proposal to the MAC for consideration.

**Action 28/2017:** The MAC agreed this action item was addressed at the 14 February 2018 meeting and could therefore be closed.

**Action 31/2017:** The Chair noted that RCP Support was reviewing information recently provided by AEMO regarding options for changes to account for late logging of Forced Outages in settlement.

**Action 33/2017:** On hold until early 2019.

**Action 34/2017:** The MAC agreed this action item was addressed at the 14 February 2018 meeting and could therefore be closed.

Action 36/2017: Mr Patrick Peake asked if RCP Support had published a schedule for the preliminary MAC discussions of the seven broader review topics identified by the MAC in its Market Rules Issues List. The Chair replied that RCP Support had determined an order for the discussions, but still needed to discuss next steps with the Panel. In response to a question from Mr Chin, the Chair advised that, due to time restrictions, the Panel discussion of the MAC Market Rules Issues List had been deferred from the 22 February 2018 meeting to the 22 March 2018 meeting.

**Action 41/2017:** The Chair noted that Mr Matthew Fairclough presented on this matter at both the 14 February 2018 MAC meeting and the AEMO WA Electricity Consultative Forum held on 20 February 2018.

Mr Dean Sharafi noted the presentations had confirmed that a Rule Change Proposal would be required to incorporate Bluewaters' suggested changes into AEMO's margin values submission to the ERA, but had also outlined what AEMO could do to make the process more efficient in the absence of a of a rule change. AEMO received one response from Synergy, which suggested that AEMO's proposal was in conflict with the Market Rules, but AEMO does not agree with this view.

The Chair suggested it was up to Market Participants to contact AEMO regarding the next steps to be taken, if any. The MAC agreed with Mr Sharafi's suggestion to close the action item.

Action 2/2018: Mr Sharafi advised that AEMO uses the emergency capacity of Scheduled Generators if necessary, and will continue to do so if needed in future. Ms Jenny Laidlaw clarified that the action item related to whether in future Market Generators will need to include their emergency capacity in their dispatch offers to ensure that AEMO's new automated dispatch system was aware of the output levels to which each Scheduled Generator was dispatched. Mr Sharafi agreed to consult with his colleagues in the National Electricity Market (NEM) and provide a further update to the MAC.

Action 3/2018: to be addressed under agenda item 9.

### 5 Update on AEMO's Market Procedures

Mr Sharafi noted the consultation period had closed for the Power System Operation Procedure (**PSOP**): Tolerance Ranges and the Monitoring and Reporting Protocol.

Mr Sharafi advised that the next round of procedure changes would include changes to the PSOP: Communications and Control Systems and the IMS Interface Market Procedure.

The MAC noted the update on AEMO's Market Procedures.

# 6 Network and Market Reform Program Update

Mr Martin, Mr Ashwin Raj and Ms Aditi Varma gave an update on the Minister's network and market reform program. The following points were discussed.

- Mr Raj noted that the PUO expected to email stakeholders the following day to advise that the submission deadline for the three papers that were out for consultation was extended to Thursday 29 March 2018.
- Mrs Jacinda Papps asked for further detail on the comments made by Ms Varma at the PUO's 13 March 2018 industry forum about reviewing the market power mitigation arrangements for the WEM. Ms Varma replied that the PUO had not yet started this work in detail, but was considering, for example, whether the implementation of co-optimisation would require changes to the short run marginal cost (SRMC) definition to account for the opportunity cost of foregone energy sales revenue.

Mrs Papps noted that the Electricity Market Review (**EMR**) had not consulted on a report it published by the Brattle Group on market power mitigation. Mrs Papps asked if the PUO intended to use that report as a basis for its ongoing work, and if so, whether it intended to consult on the report's contents. Mr Martin replied that the PUO would consider any papers previously published but its views would not limited by those reports.

- In response to a question from Mr Chin, Ms Varma clarified that while the ERA's recent draft Balancing Submission Guideline provided valid guidance on SRMC and market power for the current market, the proposed market reforms were likely to necessitate some changes to the definitions of these concepts, and the associated compliance and enforcement rules.
- Mr Peake asked how the PUO intended to consider the question of transitional compensation. Ms Varma replied that the PUO's priority at this time was to ensure an option was available to provide transitional compensation in future, if required. The design of any such mechanism was yet to be determined, and would be subject to further consultation.
- In response to a question from Mr Noel Schubert, Mr Martin confirmed the PUO's intention to publish the slides from the industry forum presentations on its website.

- Mr Martin Maticka noted that AEMO was still working with the PUO to confirm who would be leading which components of the reform program. AEMO is working to complete a full business case to submit for approval, and once completed, will provide further information and seek feedback on its proposed execution program.
- Mr Chin asked why the EY assumptions paper included a scenario for a partially constrained network access model.
   Mr Raj and Ms Varma clarified that given the upcoming entry of generators under the Generator Interim Access (GIA) arrangements, the PUO considered a partially constrained network access model was the appropriate base case to use for the EY modelling.
- In response to a question from Mr Shane Cremin, Mr Raj confirmed that the EY modelling did not assume any material investment in new transmission assets. There was some discussion about the rationale for, and validity of these conservative transmission investment assumptions.
- Mr Sharafi suggested that once the framework was changed to allow generators to connect, then congestion in a part of the network will give the proper signal for either network augmentation or any other action to remove the congestion. The MAC accepted Mr Sharafi's offer to give a presentation on this topic at the next MAC meeting.

Action: AEMO to give a presentation at the next MAC meeting on a specific scenario that can occur as a result of generators connecting to a part of the network that gives rise to either increased ancillary services requirements or a signal for investment to remove a network constraint.

**AEMO** 

- Mr Simon Middleton asked whether the Minister's office staff were invited to the industry forum, and why no representative from the Minister's office attended the event. Mr Raj replied that he was fairly sure the Minister's office staff had been invited. Mr Middleton noted that the proposed market reforms would be difficult and require a great deal of effort from a broad group of people. Mr Middleton expressed disappointment that the Minister's office had not sent a representative to talk about the importance of the reforms and Government's commitment to the reform program, as this would have provided comfort to the industry that its efforts are warranted.
- Dr Steve Gould noted that Mr Wayne Trumble had questioned the financial benefit of the proposed network access changes at the PUO's industry forum. Dr Gould asked what the Minister wanted from the reforms and considered that the reform program was following the momentum of the EMR, to some extent, without asking whether this was appropriate. Mr Martin replied that the PUO considered it had established the case for network reform previously, but intended to do some further work to re-establish that case and articulate the benefits of the proposed reforms.

- Dr Gould commented that, while a primary objective of the EMR was to remove further financing burden from the Government, it seemed the financing burden is still being placed on Synergy in one way or another. Dr Gould reiterated Mr Trumble's suggestion that the purpose of the reforms was to assist Synergy to become the renewables supplier of last resort. Mr Martin replied that this was not a policy intention of the reforms.
- Mr Middleton asked about the funding arrangements for AEMO's preparatory work on the proposed reforms. Mr Maticka replied that AEMO's current work on the program was covered by funding already approved by the ERA, and involved only a small team doing pre-planning and business case development. Mr Martin added that the PUO intended to put the necessary rules in place to allow AEMO to prepare for and implement a new market dispatch engine, and to apply to the ERA for approval to carry out that work. The PUO planned to first determine what activities AEMO needed to do, then look at what changes were needed to the Market Rules, and then follow that through in an open and transparent process.
- Mr Middleton rejected the idea that security constrained dispatch was tied to the implementation of a constrained network access model. Mr Middleton considered that a security constrained dispatch framework should be operating in the WEM regardless of the network access framework, and expressed concern about the delay in implementing security constrained dispatch. There was some discussion about the implementation of the GIA framework, the interdependencies of security constrained dispatch and constrained network access, and the urgency of reforms to the WEM's dispatch mechanisms.
- Mr Martin thanked the parties who had provided comment on the draft rules for the abolition of the Independent Market Operator (IMO). No major issues were raised in submissions, and the PUO anticipated the IMO repeal regulations and rules would be Gazetted in the first week of April 2018.
- Dr Gould expressed surprise at the EY modelling assumption that there will be no utility-scale batteries in the WEM for the next 15 years. There was extensive discussion about the likely role of utility-scale batteries over that period, the potential impact of batteries on network congestion, the need to amend the Market Rules to support the participation of storage in the WEM, and the practical difficulties of incorporating utility-scale batteries into the modelling assumptions.
- Mr Martin noted that the PUO was undertaking a separate modelling exercise to consider the future generation mix for the WEM, which would consider some of the matters raised by MAC members about the role of storage. Ms Varma added that the PUO intended to consider how to account for storage and other new technologies in the Market Rules as part of the market reform program.

# 7(a) Overview of Rule Change Proposals

The MAC noted the overview of Rule Change Proposals.

Rule Change Proposals awaiting Ministerial approval

The Chair noted that the Final Rule Change Reports for RC\_2017\_10 (Correction of Gazettal Errors) and RC\_2017\_05 (AEMO Role in Market Development) were both awaiting approval by the Minister. The Minister's decision was due on 19 March 2018 for RC\_2017\_10 and 21 March 2018 for RC\_2017\_05.

RC 2017 06 (Reduction of the prudential exposure in the Reserve Capacity Mechanism)

The Chair advised that RCP Support was working on a more detailed cost-benefit analysis for RC\_2017\_06 after receiving updated time and cost estimates from AEMO. RCP Support expected to publish a call for further submissions seeking continued support from Market Participants for RC\_2017\_06 on the basis of this cost-benefit analysis. RCP Support was also considering how the proposal could be modified to reduce costs.

Mrs Papps asked which parts of RC\_2017\_06 RCP Support was thinking of modifying. The Chair replied that this had not yet been determined. Ms Laidlaw added that if any potential changes were identified they would be included as options for stakeholder consideration in the call for further submissions, along with their estimated costs and benefits.

In response to a question from Mrs Papps and Mr Geoff Gaston, the Chair confirmed that AEMO's revised cost estimate had not been published as AEMO was still in negotiations with its IT providers and had asked that this information be kept confidential.

Mrs Papps noted Alinta's strong support for retaining the proposed changes to the responsible party reference month used for Individual Reserve Capacity Requirement (IRCR) calculations (from n-3 to n). Ms Laidlaw noted it would be helpful if the submissions to the call for further submissions included further information on the more qualitative benefits of the proposal.

Mr Maticka noted that when AEMO performed a more detailed technical analysis it found the implementation cost was going to be much greater than originally expected. AEMO still believed that RC\_2017\_06 should go forward to address the large prudential exposure in the market; and that the proposed changes would be the most effective way to address the problem. Mr Maticka suggested that Market Participants make a submission if they considered there was another, simpler solution that addressed the problem without increasing the prudential requirements; or if they wanted to provide any particular strong support to specific components of the proposal.

Mrs Papps asked at what point additional changes to the proposed Amending Rules might invalidate the rule change process, given the Draft Rule Change Report was already published. Ms Laidlaw replied that changes large enough to warrant starting the rule change process again were not expected.

The Chair reiterated the Panel's view that further consultation was necessary given the increased cost estimates provided by AEMO. Mr Maticka noted that AEMO would always take the position that the market should not be unnecessarily exposed, so if RC\_2017\_06 was rejected, then AEMO would look at another Rule Change Proposal to protect the market.

# RC\_2014\_06 and RC\_2014\_03 (Removal of Resource Plans and Dispatchable Loads)

The Chair clarified that the next step for RC\_2014\_06 was publication of the Draft Rule Change Report, while the next step for RC\_2014\_03 (Administrative Improvements to the Outage Process) would be publication of a call for further submissions.

In response to a question from Mr Maticka, the Chair confirmed there was no intention to change the Medium urgency rating of RC\_2014\_06.

# 7(b) RC\_2018\_03 - Capacity Credit Allocation Methodology for Intermittent Generators

The Chair noted that Collgar submitted the Rule Change Proposal RC\_2018\_03 (Capacity Credit Allocation Methodology for Intermittent Generators) on 1 March 2018. Collgar elected to submit the proposal without using the pre-rule change process, and so the formal rule change process had already commenced.

The Chair advised that the Panel decided to progress the proposal on the basis that due consideration should be given to whether the proposal will allow the Market Rules to better address the Wholesale Market Objectives. The first submission period was open until 20 April 2018.

The Chair invited Mr Fan Zhang from Collgar to speak to the proposal. Mr Zhang introduced Mr Kristian Myhre (who helped to develop the proposal) and gave a brief overview of the proposed amendments, suggesting that the changes were fairly simple and straightforward, but will better address the Wholesale Market Objectives.

The following points were discussed.

- Mr Middleton asked Mr Zhang to outline more clearly his concern with the existing Relevant Level Methodology. Mr Zhang clarified that, because the Load for Scheduled Generation (LSG) measure, which is used to select the peak intervals in which Intermittent Generator performance is assessed, excluded the output of Intermittent Generators; by definition it tended to remove from consideration those Trading Intervals where Intermittent Generators contribute the most. Mr Zhang's contention was that if an Intermittent Generator had a high output at the system peak it was unfair not to give the generator the benefit of its actual performance.
- Mr Myhre considered that the current Relevant Level
  Methodology very controversial when it was first implemented,
  with views largely divided between Intermittent Generators and
  other stakeholders. The decision at the time had been to err on

the side of caution, as there was insufficient information available on the performance of Intermittent Generators, and system security was the main concern.

Mr Myhre noted that the concept of capacity was based on peak demand from customers. Collgar's argument is that if Intermittent Generators are serving that peak demand, it should not really matter whether they do so at the same time as Scheduled Generators.

- Ms Laidlaw questioned the discussion of increasing photovoltaic (PV) penetration on page 3 of the proposal. Mr Myhre replied that one of the key drivers for the Relevant Level Methodology had been the desire to reward solar PV Facilities to a greater extent. Mr Myhre noted that with the increased penetration of PVs behind the meter, the typical peak demand time is moving to later in the day (e.g. from 2-3 PM to 5-6 PM). While this affected both peak demand and peak LSG, there was also growth in commercial solar farms that make an additional contribution to the shift of peak LSG Trading Intervals to later in the day.
- Ms Laidlaw noted that the proposal did not discuss the original arguments for the use of LSG – that it rewarded geographical diversity of Intermittent Generators. Mr Myhre replied that industry was divided when the Relevant Level Methodology was developed, and there was no clear backing for the use of LSG.
- Mr Myhre noted that Collgar's "back-of-the-envelope" analysis showed the proposed changes could lead to about a 25% increase in Capacity Credits for Intermittent Generators. Collgar believed this would be a reasonable first step in moving away from the current, conservative approach; although it was not a perfect solution; and Collgar was aware that the ERA will undertake a more thorough analysis of the methodology in the near future.
- Mr Myhre advised that Collgar's analysis was based on historical data for the five largest wind farms. Mr Maticka noted that AEMO's preliminary analysis suggested the change would result in about a 6 percent increase in Capacity Credits for Intermittent Generators overall, with wind farms benefitting to a much greater extent, at the expense of PV Facilities. Mr Myhre replied that Collgar's argument was philosophical in nature. The numbers presented in the proposal were purely indicative of what level of change could be expected, and could be refined using data from AEMO as part of the rule change process.
- Mr Peter Huxtable noted the proposed selection of peak Trading Intervals would not actually align with the selection of peak Trading Intervals for IRCR calculation. Mr Myhre agreed and noted that Collgar considered proposing the use of the IRCR Trading Intervals, but decided it would be too complicated a change.
- Collgar had not checked with AEMO but considered the IT costs of the proposal would not be large, given that the only proposed change was to how the peak Trading Intervals were selected.

- Mr Myhre agreed that alignment with IRCR was something to consider.
- Mr Maticka asked why Collgar considered the proposal should be progressed before the ERA's upcoming review of the Relevant Level Methodology. Mr Myhre replied that Collgar considered the proposed changes would not have a big cost impact and could be assessed against the Wholesale Market Objectives without affecting the ERA review.
- In response to a question from Mr Cremin, Ms Sara O'Connor clarified that the ERA's review would cover the whole of the Relevant Level Methodology (including the use of LSG), not just the determination of K and U values. There was some discussion about the overlap of the Rule Change Proposal and the ERA's review, and when the proposed changes might be implemented if they were assessed before or after that review.
- Mr Myhre reiterated his view that opinions on the use of LSG were divided when the Relevant Level Methodology was first developed. Mr Cremin considered the LSG concept was the result of a consultant's thought bubble, and was never supported by the affected Market Generators.
- Ms Laidlaw and Mr Cremin questioned the potential effects of constrained network access on the use of LSG, given the intention to certify capacity on an unconstrained basis but consider network constraints when assigning Capacity Credits.
   Mr Cremin suggested that using system demand instead of LSG would remove any potential conflicts.
- There was some discussion about whether the proposed change to the Relevant Level Methodology would require Market Generators with new Facilities to obtain revised expert reports.
- Dr Gould questioned whether the proposed changes could have an adverse effect on Market Generators with new PV Facilities.
   Mr Maticka noted AEMO's analysis suggested that some Intermittent Generators would benefit from the proposal while others would be disadvantaged.
- In response to a question from Dr Gould, Mr Maticka advised that for the 2017 Reserve Capacity Cycle the proposed changes would have resulted in about 15 MW of extra certified capacity and a very slight reduction in the Reserve Capacity Price.
- There was some discussion about the services required from Reserve Capacity providers, the definition of a Capacity Credit and how the Reserve Capacity Mechanism should deal with different technology types.
- In response to a question from the Chair, Mr Maticka confirmed that AEMO had not yet had an opportunity to assess the impact of the proposed amendments on its IT systems.
- MAC members and observers agreed the proposal should be assigned a Medium urgency rating, apart from Mr Middleton who preferred a High urgency rating.

 Mrs Papps asked if there was any scope for the ERA to bring forward its report on the Relevant Level Methodology.
 Ms O'Connor did not consider this would be possible, but noted the ERA intended to start the review shortly after its public workshop in April 2018.

## 8(a) Update on the MAC Market Rules Issues List

The Chair advised that a discussion of the MAC Market Rules Issues List that had been scheduled for the 22 February 2018 Panel meeting, but was deferred to the next meeting due to time restrictions.

The Chair noted that the next agenda item was a preliminary discussion of the first of the seven broader review issues identified by the MAC.

### 8(b) MAC Issues List – Roles in the Market

Mr Richard Cheng sought feedback from the MAC on the following questions in the context of the Market Rules:

- Are the appropriate Market Participants or agencies undertaking the appropriate roles/responsibilities?
- Should the roles/responsibilities of any Market Participant or agency be expanded or reduced?
- Should any of the roles/responsibilities of any Market Participant or agency be shifted to another entity, and if so, to who?
- Are there any unallocated roles/responsibilities, and if so, what are the unallocated roles and who should they be allocated to?

The following points were discussed:

- Ms O'Connor noted that the responses to the discussion paper for the ERA's last review of the WEM included numerous comments about roles, responsibilities and possible conflicts of interest. Ms O'Connor did not expect that the positions of stakeholders would have changed much since that time.
- Mr Chin noted that the ERA provided secretariat support to the Panel. Mr Chin questioned how the separation of duties was enforced and whether some sort of audit should occur to ensure there is a clear separation of duties within the ERA secretariat.

Ms Laidlaw and the Chair explained that the ERA Governing Body and Executive take no part in the review and approval of Panel work. Mr Chin expressed concern that conversation between the Panel and the ERA at a secretariat level may in some way influence the Panel's decisions.

Ms O'Connor offered to provide the MAC with some documentation on the types of Rule Change Proposals that the ERA would be prepared to develop, and the practical ring fencing arrangements in place for RCP Support.

The Chair asked Mr Chin if this information would help to address his concerns. Mr Chin replied that it would if there was a clear demonstration of how the arrangements work and that

they were effective. There was some discussion about how the effectiveness of the arrangements could be measured. Mr Middleton did not consider that a review of the ring fencing arrangements should be a high priority.

Action: The ERA to prepare a document for the MAC describing the types of Rule Change Proposals that the ERA intends to develop, and the practical ring fencing arrangements for work undertaken by the ERA to support the Panel.

**ERA** 

- Mr Martin noted that the PUO intended to consider roles and responsibilities for network and system planning functions as part of the Minister's reform program. In response to a question from Ms Margaret Pyrchla, Mr Martin confirmed that the contentious issues relating to power system security and reliability arising from the transfer of System Management to AEMO would be dealt with through the market reform program.
- Mr Sharafi identified three important responsibilities that were currently unassigned: responsibility for development of the rule changes needed to support the participation of batteries in the WEM; responsibility for planning at the system level; and responsibility for maintaining the system security and reliability standards for the SWIS. Mr Martin advised that these responsibilities would be considered as part of the market reform program.
- Mr Chin recalled previous discussions about the need for a market review function similar to that of the Australian Energy Market Commission, maybe with the ability to propose rule changes to implement review recommendations. Mr Chin also suggested the implementation of some sort of reliability panel to address reliability issues.
- Mr Martin asked if there was scope to include the broader questions about agency roles in the ERA's annual review of the effectiveness of the WEM. Mr Martin noted that the issues were raised in the last review and perhaps the next review could provide recommendations for implementation. Mrs Papps and Mr Cremin raised concerns about how the ERA's recommendations would be implemented.
- The Chair advised that RCP Support would request specific feedback on the four questions by email. Mr Peake recommended that the feedback be presented at the next MAC meeting, due to the urgency of some of the issues raised by Mr Sharafi.

Action: RCP Support to ask MAC members to email their specific feedback on the four questions raised by RCP Support regarding roles and responsibilities in the WEM; and present the results at the next MAC meeting for discussion.

RCP Support

#### 9 General Business

Western Power Presentation on Declared Sent Out Capacity (DSOC) – Action Item 3/2018

Mr Dean Frost gave a presentation on how Western Power sets the DSOC for a generating unit and the role of temperature in its determination process. A copy of the presentation is available on the Panel's website. The following points were discussed.

- Mr Frost explained that the DSOC of a generating unit was based on an assessment of the installed generation capacity, accounting for any load at the site and any relevant Technical Rule requirements. DSOC has implications for market, system and network operations, and is used in calculating Loss Factors.
- Mr Frost noted that a generating unit is subject to excess network usage charges if it exceeds its DSOC. Additionally, in real-time there may be actual violations that need to be managed by bringing a unit back to its declared limit.
- Mr Peake noted that the Merredin Power Station could generate about 10% more than its DSOC under normal temperature conditions, but is not permitted to make this extra capacity available to the market. Dr Gould considered the use of a single DSOC that applied under all temperature conditions prevented the full utilisation of the generating units and the network. Dr Gould questioned whether the concept of DSOC could be changed to allow the maximum permitted output level to vary by season, month or even time of day.
- Mr Schubert considered that, from a network access viewpoint, DSOC should only be applied at times when it mattered to the network. At other times, when there was spare capacity on the network, network customers should not be penalised for exceeding their DSOC. There was some discussion about how a Market Generator would know when it was able to exceed its DSOC without penalty.
- Mr Sharafi agreed there was value in considering Dr Gould's suggestion, noting that Western Power already provided summer and winter ratings for some network components.
   Mr Sharafi considered that network limits may need to be more flexible in future. Mr Frost replied that Western Power intended to move in this direction.
- Mr Middleton asked if System Management had visibility of dynamic line ratings in the network. Mr Sharafi replied that System Management did not yet use dynamic line ratings, but agreed this is an option for the future.
- Mr Middleton asked whether the NEM Dispatch Engine used dynamic line limits in its constraint equations, and Mr Ben Skinner confirmed that this was the case.
- Mr Schubert suggested that Loads should also be able to exceed their Contract Maximum Demands without penalty when spare network capacity was available.

The meeting closed at 2:45 PM.