

## 5MS Systems Working Group (SWG) Meeting Notes

MEETING: 11  
 DATE: Monday, 17 June 2019  
 TIME: 10:00 AM – 1:00 PM  
 LOCATION: AEMO Offices Melbourne, Brisbane, Sydney and by Webex

### ATTENDEES:

ATTENDEE	ORGANISATION	OFFICE
Jim Agelopoulos	AEMO	Melbourne
Sammy Wainrit	AEMO	Melbourne
Simon Tu	AEMO	Melbourne
Greg Minney	AEMO	Melbourne
Anette Reitmann	AGL	Melbourne
Greg Fawcett	Engie	Melbourne
Drew Pass	Engie	Melbourne
Varun Dewan	Engie	Melbourne
Tariq Pervaz	Red Energy	Melbourne
Arif Syarifuddin	Powercor	Melbourne
Rob Novella	AusNet Services	Melbourne
Monica Morona	AEMO	Sydney
Alex Polonetskiy	Ausgrid	Sydney
Victor Sanchez	Infigen	Sydney
Hamish McNeish	AEMO	Brisbane
Blaine Miner	AEMO	Brisbane
Adam Branson	Stanwell Corporation	Brisbane
Adam Nielson	Stanwell Corporation	Brisbane
Ian Devaney	AEMO	Norwest
Adam Dubojski	Essential Energy	Remote – Webex
Adrian Honey	Tas Networks	Remote – Webex
Andrew Steer	Gentrack	Remote – Webex
Divya Kapoor	Flow Power	Remote – Webex
Dan Hillier	Meridian Energy	Remote – Webex
Dino Ou	Endeavour Energy	Remote – Webex
Deepak Sood	Tango Energy	Remote – Webex
Elizabeth Byrne	Stanwell Corporation	Remote – Webex
Gerard Dunne	Stanwell Corporation	Remote – Webex
Ingrid Farah	Ergon Energy	Remote – Webex
Jarraah Van Rijswijk	Hydro Tasmania	Remote – Webex
Justin Needham	SA Power Networks	Remote – Webex
Justin Wearne	Energetiq	Remote – Webex
Jackie Mayo	EnergyQ	Remote – Webex
Joseph Giddings	Energy One	Remote – Webex
Kevin Boutchard	Aurora Energy	Remote – Webex
Matt Thornley	Energy One	Remote – Webex
Martin Vyhnalek	Origin Energy	Remote – Webex
Madhuri Maleki	AusNet Services	Remote – Webex
Owen Self	Stanwell Corporation	Remote – Webex
Paul Sampson	Acumen Metering	Remote – Webex

Paul Willacy	Aurora Energy	Remote – Webex
Paul Greenwood	Vectorams	Remote – Webex
Rahman Qazi	Endeavour Energy	Remote – Webex
Rajesh Hariharan	Origin Energy	Remote – Webex
Richard Marshall	Alinta Energy	Remote – Webex
Stewart Bryce	ERM Power	Remote – Webex
Steve Caruana	Energy One	Remote – Webex
Shane Basnayake	Energy One	Remote – Webex
Snehal Jogiya	ERM Power	Remote – Webex
Suresh Maguluri	Hydro Tasmania	Remote – Webex
Sam	?	Remote – Webex
Yeyen Relingo	EnergyQ	Remote – Webex

**NOTE: NOT ALL ATTENDEES JOINING BY DIAL IN MAY HAVE BEEN IDENTIFIED.**

### **Preliminary Matters**

1. Attendees were welcomed to Systems Working Group #11 (SWG).
2. Minutes and Actions from last meeting – H. McNeish (Slides 3 to 7)
  - The minutes from meeting held 20 May 2019 were accepted. AEMO provided updates on all open items and the SWG discussed the outstanding actions as reflected in the attached table.
  - Action 9.7.3 - Metering – Meter Data Delivery - No feedback has been received and this item is now closed
  - Action 9.7.6 - Metering – Meter Data Delivery – Feedback supporting retiring MSATS reports has been received, there was no feedback of concerns. This item is now closed.

AEMO encouraged SWG Members to review the RM reports to be retired - if they haven't done so already.

### **Matters for Noting**

#### **Systems Workstream Updates**

3. Program and Milestone Update – H. McNeish / M. Morona (Slides 8 to 11)
  - AEMO provided a stakeholder update as per the slides.
  - AEMO outlined the proposed approach to impact assessment associated with a proposed change to AEMO milestones, to assess potential industry impacts.
  - This approach is being followed in the SWG milestone discussion today.
  - No queries or comments were raised by SWG Members.
4. Retail Stream Update – J. Agelopoulos (Slides 13 to 17)

AEMO noted that the status update slides differ from distributed slides, as AEMO has included additional slides to better highlight the proposed milestone amendments and to capture the current consideration of the impacts of the milestone change.

### **Key Changes:**

- B2M via API has moved from package 2 to package 3.
  - B2M via API is not technically related to Package 2 and relates to AEMO improving its APIs.
- The changes for this are included in the MSATS Technical Specification.

### **Key technical documents released to-date:**

- MDFF NEM12 and NEM13 specification is now a technical document not a procedure;
- MDM File Format and Load Process, now a technical document not a procedure;
- MSATS Technical Specification; and
- Systems High Level Impact Assessment.

Metering Systems Package 3 will update these same documents adding more content

### **Milestone Impact Discussion:**

- L2-M1 – This has been delayed 10 business days. AEMO does not believe there is any subsequent impact to L2 Milestones from this delay.

AEMO sought SWG attendee feedback on the proposed amendments. Attendees noted that this change was minor and unlikely to impact participants.

- L2-M2 – AEMO proposed that, while the MDFF, NEM12 and NEM13 specification has been re-opened for consultation in Metering Procedures Package 2, the document remains final with a 30 April 2019 date.

A participant queried the risk of this document changing in the Package 2 consultation, AEMO stated the risk was very low as this change was already been consulted on in Package 1, and the proposed change is very minor/inconsequential – essentially a change required that was really an oversight as part of in Package 1 amendments. The specification is sufficient to build systems against.

SWG attendees supported keeping the date as 30 April 2019.

- L2-M3 – The key change is to shift the B2M via API from Metering Systems Package 2 to Package 3.

The MDM File Load and Processing document is included in the Metering Procedures Package 2, and as such is at high risk of being delayed to 30 September 2019. AEMO will be able to assess this further once the Metering Package 2 initial submissions are received (due 24th Jun).

AEMO is proposing to add further detail on the transition of meter file formats from December 2020 to 1 July 2021 for interval data, to clarify that AEMO's systems will continue to support MDMF for interval reads during this period.

The MDM File Load and Processing document is a critical document for MDPs to be able to make changes to their own MDM systems. Any feedback on this document should be submitted in submissions as part of the Metering Package 2 consultation.

AEMO requested feedback on participant's schedule impact and risk, should the release of the final version of the MDM Load and Processing document shift to 30 Sep 2019.

AEMO provided additional context on the MDM Load and Processing document changes:

- Details how the MDM files are treated from a systems perspective;
- Includes detail on how standing data will transition;
- Requirement MDP's need to support for the transitional approach being offered for NMI's transitioning from NET level to Register level information;
- The procedure provides an interim solution to allow the transition from NET to register level over time;
- MDPs and AEMO are directly impacted as they are exchanging this information; and
- Retailers and Generators will be indirectly impacted as AEMO will be generating NET reads from the register level information, so indirectly there is a risk to the settlement process.

MDPs in the room requested to take this on notice and come back with a response/views.

**Action 11.4.1: MDPs, Retailers and Generators to raise any likely impact on their schedules or associated risks should this document be delayed to 30 Sep 2019**

- L2-M4 – B2M via API has moved into this technical specification. This is related to with Metering Package 2.
  - Includes RM reports and MSATS Browser changes
  - B2M via API response files, such as JSON need to be fleshed out
  - There is a chance that additional RM reports may be required if identified as part of the Global Settlement changes – covered in Metering Package 2
  - More detail is required on the MSATS Browser on querying meter data

**Action 11.4.3: MDPs, Retailers, Distributors and Generators to raise any likely impact on their schedules or associated risks should this document be delayed to 30 Sep 2019**

5. Dispatch Stream Update – I. Devaney (Slides 18 to 22)

AEMO noted that overall the Dispatch stream is progressing well internally to deliver the first six packages in November. Noted that there is now a date for the Full Data Model – 29 November 2019 for the commencement of the Staging Environment. This will include the scripts for all data model changes, noting there may be changes before the pre-prod release.

AEMO noted that there are new Dispatch Level 2 milestones in relation to Systems Packages 4 and 5.

Stanwell sought clarity regarding the differing dates between Package 5 of January 2020 and the Full Data Model of November 2019. AEMO confirmed that this was correct and that the intention was to provide the release into the Staging environment. AEMO noted that this work will be largely finalised and is only anticipated that minor tweaks would be made on an incremental basis to the Staging environment if requirement.

## 6. Settlements Workstream Update – H. McNeish (Slides 23 to 26)

AEMO noted that the stream lead Bhanu Rajan has finished with the program.

AEMO noted that there are no changes to the planned settlement timeline or milestones.

As part of the forward agenda, AEMO noted that Reallocations will be looked at in detail with the draft technical specification due in July.

### **Matters for Discussion**

## 7. Global Settlement – B. Miner (Slides 27 to 32)

AEMO sought to distinguish the 1 July 2021 requirement as opposed to 6 February 2022 requirement for the SWG and address the misconception that participants would have time consider the impacts and adjust programs between these dates.

AEMO informed the group that the impact of Global Settlement begins 1 July 2021 and AEMO is required to publish UFE information from this date.

AEMO has started to engage groups including the Metering Focus Group to understand what needs to be done prior to implementation.

All procedures relevant to the implementation of Global Settlement need to be completed by 1 December 2019 and AEMO advised that it is tracking ahead of this date.

Updates to standing data in MSATS will also need to be completed and inventory load tables populated. Non-contestable unmetered loads will also be introduced prior to Global Settlement.

Participants queried if load and inventory tables will be updated in MSATS by TNSPs and sought to understand the rationale behind it. AEMO advised that options are being proposed and awaiting feedback as part of the consultation process.

Stanwell requested confirmation in regard to their understanding that data systems are required to be updated and ready for Global Settlement at 1 July 2021.

## 8. Metering Focus Group Outcomes – B. Miner (Slides 33 to 36)

AEMO noted that significant detail was discussed at the Focus Group and that this update would provide a brief summation of the discussion, with a full debrief to be provided at the July SWG. Meeting notes will be available week commencing 24 June 2019.

AEMO noted that the Focus Group is very aware of the implications and requirements of 1 July 2021 and 6 February 2022.

## 9. MSATS Standing Data Scenario – S. Tu (Slides 37 to 41)

As indicated AEMO is in consultation around the required Global Settlements (GS) changes. Additionally, there are ongoing conversations from a readiness perspective with industry, with the expectation that the Readiness Working Group will identify the finer details. AEMO noted that the scenarios presented represented initial concepts from AEMO.

Further details for each MSATS Standing Data Scenarios can be found in the Appendix of the SWG slide pack. Should the SWG like a more detailed walkthrough of these scenarios, this can be arranged as a one-off session for SWG members.

**ACTION 11.9.1: SWG Participants to inform AEMO if a more detailed Scenario discussion is required.**

AEMO has identified seven MSATS Standing data scenarios required to support Global Settlements; this is to allow AEMO systems to allocate energy associated to various types of loads for UFE calculation. These codes will be available in MSATS from 1 December 2020.

The participants with the responsible role for these NMIs will have from 1 December 2020 until 1 July 2021 to update the NMI Classification Code using the CR 5050, 5051 Maintain NMI - Change an NMI defined in the WIGS Procedures.

Additionally, for the impacted NMIs on 6 February 2022, the LR role will need to be updated to GLOPOOL as a 'big bang'.

Battery and other hybrid systems that draw energy as well as generate will be classified as 'THYBRID' or 'DHYBRID' - depending on whether they are connected to the Transmission or Distribution network.

All TNI NMI (WHOLESALE) to 'BULK'

Distribution and Embedded Network connected Generator to 'DGENERATR' distinguished from Transmission connected 'GENERATR'

Distribution and Embedded Network connected Small Generator Aggregator to 'SGA'

All Non-contestable Unmetered Loads to be registered in MSATS using the NMI Classification Code to 'NCONUML' and the new Meter Installation Type Code 'NCONUML'. A forward estimate required prior to 1/07/2021 to calculate UFE

Forward estimates also required for Tier 1 Meter Data

HV Distribution to Distribution Cross Boundary NMI from WHOLESALE to 'XBOUNDARY'  
The LR role change will be undertaken by AEMO. As with Power of Choice AEMO will be undertaking a Bulk Change for all impacted NMIs. To prevent flooding the market with notifications AEMO will not send these and it is the responsibility of Participants to update the LR role in their own market systems.

## 10. Readiness Working Group Update – G. Minney (Slides 42 to 44)

AEMO presented slides outlining the establishment of the Readiness Working Group and the scope and overall strategy. The slides provided an indication of when various deliverables will be issued for consultation and finalisation.

AEMO confirmed specialised focus groups will be set up with particular focus on market testing, planning and execution.

The initial Readiness Working Group meeting is scheduled for 27 June. Invites have been distributed to nominated representatives.

As directed by the PCF the RWG will explore an approach to interim readiness reporting.

Participants queried the distinguishing of MDPs in terms of accreditation update and raised concerns as to if there would be any distinction between participants and market roles and how the Readiness Working Group can assist participants to be ready if all participants are treated the same.

AEMO advised that as part of transition planning, readiness reporting criteria will be established and explained the difference between transition planning approach and accreditation being for a special class of market participants requiring accreditation by AEMO.

## Other Business

### 11. Technical Document Update – H. McNeish and S. Tu (Slides 45 to 47)

Technical document feedback is provided in the included documents:

- MSATS Technical Specification DRAFT v0.12 - Feedback
- Systems HLIA DRAFT v0.8 - Feedback

These documents include: all provided feedback, AEMO's response and any proposed update to the documents. Most of the feedback received was for clarification of information.

AEMO draws attention to the MDM File Format and Upload Process as a key technical document. Feedback for this should be via the Metering Procedures Package 2 consultation process.

AEMO sought feedback from MDPs on the value of 'informational' warnings. This is where the standing data has been validated as missing for MDFF supplied metering data. Since this was proposed, further discussion has questioned the value Participants will receive from these warnings, as there is potential for these to occur: as part of the standard meter churn, and for new installations where MDPs send metering data before the meter's standing data is established.

AEMO requested MDPs to provide feedback for the Metering Procedures Package 2 consultation, as to their view on the value of this approach.

**Action 11.11.1: SWG Members to consider including detail on any submissions for Metering Procedures Package 2 on the value of warnings where meter standing data is not yet configured in MSATS**

### 12. Forward Meeting Plan – H. McNeish (Slides 48 to 51)

AEMO presented the SWG forward meeting schedule and requested feedback on the planned content.

- It was proposed and agreed to discuss more detail on the Staging Environment for the August SWG#14
- It was noted that there will be a Metering Focus group in July; outcomes from this will be included in the August SWG#14
- Updates on the Readiness activities was raised and viewed as very important – it was agreed to include this as an item in subsequent SWGs

AEMO highlighted that the forward meeting calendar has been updated through to December 2019 on the AEMO website. AEMO also noted that there is a problem with the web calendar not working, so a downloadable version has been provided on the web page.

AEMO requested feedback whether participants would like additional focus groups on a particular item, outside the standard Dispatch, Settlement and Metering focus groups.

**Action 11.12.1: AEMO to include Staging and Metering Focus Group updates at the August SWG#14**

**Action 11.12.2: AEMO to add Readiness updates as a standing agenda item at the SWG**

**Action 11.12.3: SWG Members to provide feedback on any items where a focus group may be beneficial**

### 13. General Questions – H. McNeish (Slides 52 and 53)

A query was raised about whether information would be provided on releases to the 5MS Staging environment

- AEMO confirmed that for any release into the environment information would be provided to participants
- AEMO will discuss more detail around the Staging environment release in the August SWG#14

Update of Previous Action Points & New Actions Raised

Item	Topic	Action required	Responsible	By
<b>SWG 9</b>				
9.2.1	Matters for Noting – Item 7.9	AEMO to respond to sub-domain support for the API gateway.	Mal Borschman	Closed Every domain must be registered. System doesn't automatically support subdomains.
9.3.1	Retail Stream Update	Pushing out MSATS browser HLIA update to May.	Jim Agelopoulos / Mal Borschman	Closed Updated High Level Impact Assessment (HLIA) has been distributed and will be published on the webpage today.
9.7.1	Metering – Meter Data Delivery	AEMO to provide link to MSATS error codes	Simon Tu	Closed Have been provided in appendix for this pack. Questions to be addressed to 5MS.
9.7.2	Metering – Meter Data Delivery	AEMO to provide B2B Procedures link regarding the approach to handling error, event codes, free text explanations, etc., along with examples by 31 May	Simon Tu	Closed Have been provided in appendix for this pack. Questions to be addressed to 5MS.
9.7.3	Metering – Meter Data Delivery	Participant feedback regarding the proposed approach to revised MSATS error codes	Simon Tu	Closed No feedback received.
9.7.4	Metering – Meter Data Delivery	AEMO to confirm that MDMT “pull” function will be maintained	Simon Tu	Closed On participant request for this to be maintained as a “pull” report. Updated specification to be “push and pull” report.
9.7.5	Metering – Meter Data Delivery	Participant feedback required in regard to RM reports identified to be retired; are any of these reports utilised or business critical.	SWG Members	Closed No participant feedback received.

9.7.6	Metering – Meter Data Delivery	AEMO to provide clarification for reporting in the cutover period, where the reports go across the 30min and 5min intervals, will reports display data for both 48 and 288 intervals.	Greg Minney	Pending Greg Minney with be leading the Readiness Workstream and working through strategy and approach documentation in regard to cutover. Dates will be publicised to the SWG when known.
9.7.7	Settlements – Reconciliation Support Workshop	AEMO to provide information on the proposed reconciliation support workshop in May 2019.	Austin Tan	Closed Email sent in relation to Support Reconciliation Workshop being held Wednesday 22 May.
9.9.1	General Questions	SWG members to provide feedback regarding SWG current and future engagement activities via <a href="mailto:5ms@aemo.com.au">5ms@aemo.com.au</a> .	Mal Borschman / Monica Morona	Closed Feedback received via SWG post-working group survey.
<b>SWG 10</b>				
10.2.1	Matters for Noting	Share notes from Reconciliation Support Workshop being held 22 May.	Monica Morona	Closed Meeting notes available on the AEMO 5MS website – <a href="http://aemo.com.au/-/media/Files/Electricity/NEM/5MS/Program-Information/2019/Reconciliation-Support-Workshop.pptx">http://aemo.com.au/-/media/Files/Electricity/NEM/5MS/Program-Information/2019/Reconciliation-Support-Workshop.pptx</a>
10.3.1	Systems Work Stream Updates - Metering	Table will be edited to indicate documents that are technical specifications.	Jim Agelopoulos	Closed
10.4.1	Systems Work Stream Updates - Dispatch & Operations	Based on feedback, prepare table to identify technical specification documentation clearly, the package they relate to and the content.	Hamish McNeish	Closed Addressed through SWG website update.

10.9.1	General Questions	Historical data – AEMO to investigate and clarify with procedures team.	Hamish McNeish	Closed Metering Package 2 Metrology Part B contains a proposed estimation methodology that addresses this scenario. Package 2 first stage submissions are open until 24 June 2019 – <a href="http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Procedures-Workstream/Metering-package-2---MSATS-and-SLPs">http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement/Procedures-Workstream/Metering-package-2---MSATS-and-SLPs</a>
10.9.2	General Questions	Confirm with procedures group where details on Global Settlement are published for consultation.	Blaine Miner	Closed Global Settlements procedures changes are included in Metering Package 2. See above.
10.9.3	General Questions	Add Global Settlement as a general item to agenda to discuss the specifics of system changes and the impact to Global Settlement.	Hamish McNeish	Closed Included in 17 June 2019 meeting.
10.9.4	General Questions	AEMO will consider approach and advise participants when error codes are proposed to be published.	Jim Agelopoulos	Pending AEMO is currently considering approach and will advise participants when error codes are proposed to be published.
10.9.5	General Questions	Present findings of Metering Focus Group discussion at next SWG.	Blaine Miner	Closed Preliminary update provided at 17 June 2019 SWG, with a full debrief to be provided at the July SWG.
<b>SWG 11</b>				
11.4.1	Metering Update	MDPs, Retailers and Generators to raise any likely impact on their schedules or associated risks should this document be delayed to 30 Sep 2019	SWG Participants	26 June 2019

11.4.2	Metering Update	MDPs, Retailers, Distributors and Generators to raise any likely impact on their schedules or associated risks should this document be delayed to 30 Sep 2019	SWG Participants	26 June 2019
11.9.1	MSATS Standing Data Scenarios	SWG Participants to inform AEMO if a more detailed Scenario discussion is required via <a href="mailto:5ms@aemo.com.au">5ms@aemo.com.au</a>	SWG Participants	3 July 2019
11.11.1	Technical Document Update	SWG Members to consider including detail on any submissions for Metering Procedures Package 2 on the value of warnings where meter standing data is not yet configured in MSATS	SWG Participants	24 June 2019
11.12.1	Forward Meeting Plan	AEMO to include Staging and Metering Focus Group updates at the August SWG #14	AEMO	15 July 2019
11.12.2	Forward Meeting Plan	AEMO to add Readiness updates as a standing agenda item at the SWG	AEMO	15 July 2019
11.12.3	Forward Meeting Plan	SWG Members to provide feedback on any items where a focus group may be beneficial	SWG Participants	3 July 2019