

AGENDA

MEETING: 5MS PROGRAM – PROCEDURES WORKING GROUP

DATE: FRIDAY, 3 AUGUST 2018

TIME: 09:30AM – 1:00PM AEST

LOCATION: MELBOURNE, LEVEL 22, 530 COLLINS STREET, VIC
 SYDNEY, LEVEL 2, 20 BOND STREET, NSW
 BRISBANE, LEVEL 10, 10 EAGLE STREET, QLD
 ADELAIDE, LEVEL 9, 99 GAWLER PLACE, SA

TELECONFERENCE: DIAL: **1800 055 132** MEETING ID: **93233884**

MEMBERS: NOMINATIONS AS LISTED

No.	Agenda Item	Paper	Responsible	Action
Preliminary Matters				
1	Welcome, introductions and apologies		Emily Brodie	Note
Matters for Noting				
2	Re-cap on 5MS	<i>Presentation</i>	Gary Eisner	Note
3	5MS program engagement	<i>Presentation</i>	Gary Eisner	Note
4	SRA update	<i>Presentation</i>	Christine Kang	Note
Matters for Discussion				
5	PWG and focus group approach	<i>Presentation</i>	Emily Brodie	Discuss
6	Packaging and prioritising the procedures	<i>Presentation</i>	Emily Brodie	Discuss
7	Dispatch – Bids & Offers	<i>Presentation</i>	Michael Sanders	Discuss
8	Metering – Metering Data	<i>Presentation</i>	David Ripper	Discuss
Other Business				
9	General questions		Emily Brodie	Discuss
10	Forward meeting plan	<i>Presentation</i>	Emily Brodie	Note

Next meeting: **20 August 2018**

5MS Program – Procedures Working Group Membership List

26 July 18

Organisation	Representative	
Active Stream	Primary	Balwant Singh
Acumen Metering	Primary	Ty Crowhurst
AGL Energy	Primary	Chris Streets
	Secondary	Dan Mascarenhas
Alinta Energy	Primary	Anders Sangkuhl
Aurora Energy	Primary	Paul Willacy
	Secondary	Kevin Boutchard
AusNet Services	Primary	Justin Betlehem
	Secondary	Rhianna Findlay
Endeavour Energy	Primary	Matthew Parker
	Secondary	Dino Ou
Energy Australia	Primary	Georgina Snelling
	Secondary	Andrew Godfrey
Evoenergy	Primary	Jeff Roberts
	Secondary	Andrew Jumeau
Hydro Tasmania	Primary	Prateek Beri
	Secondary	Martin Ralph
InterGen	Primary	Robert Pane
Jemena	Primary	Mohan Kuppusamy
	Secondary	Peter Spittle
Lumo Energy	Primary	Stephanie Lommi
Metering Dynamics	Primary	Jonathan Briggs
Momentum Energy	Primary	Chantal Wright

Origin Energy	Primary	Shaun Cole
Plus ES	Primary	Linda Brackenbury
SA Power Networks	Primary	David Woods
Secure Meters	Primary	Richard Metherell
Simply Energy	Primary	Aakash Sembey
Snowy Hydro	Primary	Panos Priftakis
Stanwell Corporation	Primary	Adam Gritton
	Secondary	Adam Neilson
TasNetworks	Primary	Adrian Honey
Telstra	Primary	Piera Lorenz
Tilt Renewables	Primary	Marcelle Gannon
Vector Advanced Metering Services	Primary	Paul Greenwood



5MS Procedures Working Group

Friday, 3 August 2018

AEMO Offices:

Level 9, 99 Gawler Place, Adelaide

Level 10, 10 Eagle Street, Brisbane

Level 22, 530 Collins Street, Melbourne

Level 2, 20 Bond Street, Sydney

DIAL IN: 1800 055 132 MEETING ID: 93233884

Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE
Preliminary Matters			
1	09:30am - 09:40am	Welcome, introduction and apologies	Emily Brodie (AEMO)
Matters for Noting			
	09:40am – 09:50am	Re-cap on 5MS	Gary Eisner (AEMO)
	09:50am – 10:10am	5MS program engagement	Gary Eisner (AEMO)
	10:10am – 10:20am	SRA update	Christine Kang (AEMO)
Matters for Discussion			
	10:20am - 10:40am	PWG and focus group approach	Emily Brodie (AEMO)
	10:40am – 10:50am	Break	
	10:50am - 11:10am	Packaging and prioritising the procedures	Emily Brodie (AEMO)
	11:10am – 11:50am	Dispatch procedures – Bids and offers	Michael Sanders (AEMO)
	11:50am – 11:55am	Break	
	11:55am – 12:35pm	Metering procedures – Metering data	David Ripper (AEMO)
Other business			
	12:35pm – 12:55pm	General questions	Emily Brodie (AEMO)
	12:55pm – 1:00pm	Forward meeting plan	Emily Brodie (AEMO)

Re-cap on 5MS

Gary Eisner

5MS Summary

AEMC Decision

- Final rule change made 28 Nov 2017 with industry go live 1 July 2021
- Removes the anomaly between five-minute dispatch and 30-minute settlement, which has been identified as a contributing factor to disorderly bidding.
- Provides a clearer price signal for investment in fast response technology, including batteries and demand response.

Key functional implications of 5MS include:

Metering

- Central systems acceptance of five-minute metering data from the market.
- Adjusting interval meters to deliver data at five-minute intervals.
- Controlled Load Profile (CLP) and Net System Load Profile (NSLP) change from 30-minute to five-minute.

5MS Summary

Settlement Calculation

- Profiling algorithms introduced to derive five-minute energy data.
- Transactions will need to be calculated for each five-minute period.
- Settlement estimation will calculate energy transactions for every five-minute period.
- Inter-regional and intra-regional residue will be calculated on a five-minute basis.
- A number of non-energy transactions, such as market ancillary services (i.e. FCAS) and compensation recovery, will be completed using five-minute energy volumes.

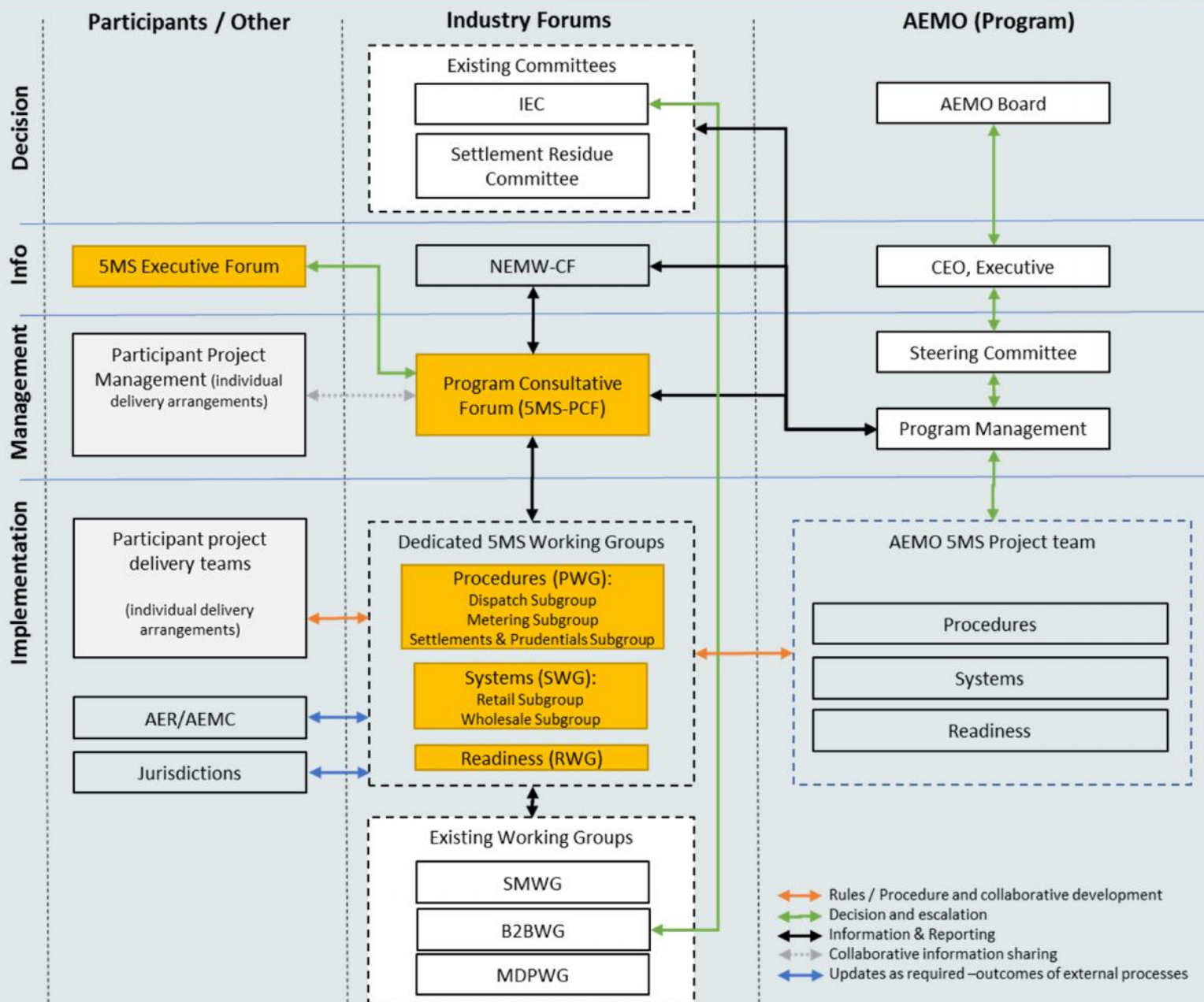
Dispatch & Market Information

- Daily bidding intervals to increase from 48 to 288. AEMO will create new data structures to receive, use and store five-minute bids and offers.
- 30-minute pre-dispatch and PASA processes that use bid information will be provided with five-minute data.
- Market participant systems will need to be updated to submit and receive confirmations of five-minute bid and offer data.
- AEMO will publish five-minute data.

5MS Program Engagement

Gary Eisner

Program engagement structure



Program forums and groups

Group	Purpose	Timing
Program Consultative Forum (5MS-PCF)	The primary program coordination and communication between AEMO and industry program teams (meets monthly)	Monthly, starting July 2018
Executive Forum (5MS-EF)	Provide appropriate level of executive oversight and escalation of issues and concerns (meets quarterly)	Every 2 months, starting July 2018
Procedure Working Group (5MS-PWG)	To facilitate the consultation on procedures, with focus groups for dispatch, metering, and settlements	Monthly, starting August 2018 (focus groups as required)
Systems Working Group (5MS-SWG)	To facilitate design and implementation of systems and interfaces, with focus groups covering retail and wholesale interfaces	Monthly, starting August 2018 (focus groups as required)
Readiness Working Group (5MS-RWG)	Formed in the lead-up to industry readiness testing, to support the planning and execution of readiness activities	Monthly, starting mid-2019

Other forms of engagement

- Focus groups
- Consultations (Rules-based)
- Email updates
- Newsletter
- Fact Sheets
- Face to face
- Information sessions

SRA update

Christine Kang

Settlement residue auction package

Background

- Settlements Residue Auctions (SRAs) give eligible Registered Participants access to inter-regional settlements residue (IRSR) by enabling them to bid for entitlements to a proportion of the total IRSR.
- 2021Q3 units will be the first to be affected by the change to 5MS. The auction for the first tranche of 2021Q3 units opens on 3 Sept 2018 and closes on 17 Sept 2018.

Settlement residue auction package

5MS procedure impact

- The Settlement Residue Committee (SRC) is providing comments on proposed changes to *Guide to the SRA* which remind participants of the impact of 5MS. The SRC is also considering other SRA issues associated with 5MS. The final version of the guide will be presented at the next SRC meeting (Fri 3 Aug), and published by Fri 10 Aug and the SRC will continue to consider associated issues.
- Please contact your SRC industry representative for more information on the issues being considered or to provide feedback:
<http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Settlements-and-payments/Settlements/Settlements-Residue-Auction/Settlement-Residue-Committee>

PWG and focus group approach

Emily Brodie

PWG objectives

- The PWG is a forum for industry stakeholders to engage with AEMO during the procedure development process:
 - Engaging early in the procedure development process to will help to identify any potential areas of concern
- Draft terms of reference for the PWG, available at:
<http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>

PWG expectations

- Expected that the PWG will meet monthly:
 - Proposing to be a 3-hour meeting
 - Held by video conference in Brisbane, Sydney, Melbourne and Adelaide
 - Tele-conference dial-in, however preference for attendance in person at an AEMO office
- PWG members are expected to:
 - have authority to consider PWG matters on behalf of their business
 - have a thorough understanding of the five-minute settlement and global settlement rule changes
 - be prepared to participate in discussion
 - provide information on PWG processes and outcomes back into their business
- The PWG is not a decision-making group – escalation of any contentious matters will be via AEMO's program and the Executive Forum

Focus groups (1)

- Expect to form focus groups as needed where a complex discussion on particular procedures/packages is required
- Focus group outputs will be fed into AEMO's procedure development process, noting that formal consultation will then occur
- Focus group members will be:
 - nominated by the PWG and AEMO (could be drawn from the distribution lists of existing/dormant working groups)
 - limited to candidates with suitable subject matter experience and expertise, not every business will need to be represented in a focus group

Focus groups (2)

- Logistics of each focus group will be related to nature of subject matter and feedback from PWG, for example:
 - Complex procedures/packages will involve face-to face workshop/s (4 to 5 hours)
 - Uncontentious procedures/packages could involve a 1 hour teleconference
 - PWG/AEMO could agree that a focus group is not required for particular procedures/packages
 - Other
- Systems Working Group (SWG) will also run focus groups, coordinated with procedures program


Procedures – scope of consultation

- AEMO needs to update around 70 procedures as part of 5MS implementation
- Around 20 of these must go through the ‘rules consultation procedure’ (2 rounds of formal consultation)
- Intending that the remaining ~50 procedures be released for comment

Procedures – proposed approach to consultation

- Prior to each PWG meeting, it is expected that AEMO will provide:
 - an impact assessment for the procedures under consideration
 - the proposed approach to updating the procedures for 5MS
 - options for review and discussion
- The PWG will then consider:
 - the content of the impact assessments for completeness
 - the consultation approach for the different packages of procedures, particularly across dispatch, metering, settlements and prudentials
 - forming or utilising existing focus groups specific to these functional areas, due to the specialised nature of knowledge and expertise required
- Focus groups or will be held face-to-face and provide technical input into procedure development
- ‘Rules procedures’ will then be subject to formal consultation, other procedures will be released for comment.

Approach to consultation - example

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- AEMO provides PWG with high level impact assessments for a package of procedures, approach to consultation and suggested focus group activities
 - PWG considers impact assessment content, consultation approach and suitability of the focus group
 - Focus group members nominated by PWG and AEMO
 - First focus group meeting/s held, outcomes fed into procedure development process
 - Possible follow up face-to-face meeting or teleconference with focus group
 - Formal consultation begins:
 - rules consultation process where required
 - procedure released for comment where rules consultation not required

Discussion

- Suitability of proposed approach to consultation via PWG, focus groups and formal consultation processes
- Alternatives to proposed approach
- Draft terms of reference for the PWG, available at:
<http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>
- Nominations process for focus groups

Packaging and prioritising the procedures

Emily Brodie

Procedures packaging

- Refer to procedures packaging attachment:
 - Metering
 - Settlements
 - Prudentials
 - Dispatch
- Discussion:
 - Suitability of procedures packaging
 - Alternatives to procedures packaging

Indicative prioritisation

	PWG DATE	PACKAGE <small>*Rules consultation process not required</small>	Prioritisation
2018	27 Jul 18	Dispatch - Bids and offers* Metering - Metering data Settlements - SRA changes	<ul style="list-style-type: none"> Bids/offers and metering data procedures are inputs into 5MS IT system requirements. Rules consultation not required but will provide impact assessment and draft for comment. SRA auction for 2021Q3 occurring in Sep 18
	20 Aug 18	Settlements - Estimation Dispatch - Pricing	<ul style="list-style-type: none"> Pricing procedures going through separate rules consultation process in mid 2018, update for 5MS at same time
	13 Sep 18	Prudentials - Prudentials	
	11 Oct 18	Dispatch - Spot market Settlements - Miscellaneous	
	16 Nov 18	Metering – MSATS and SLPs	<ul style="list-style-type: none"> Outcomes of Global Settlement rule change relevant to these procedures. GS draft rule expected Sept, final rule expected Nov.
	13 Dec 18	TBA	
2019	Feb 19	Dispatch – Specifications* Dispatch – Miscellaneous* Metering – Miscellaneous*	<ul style="list-style-type: none"> Rules consultation not required, will likely provide impact assessments and draft procedures for comment
	Mar 19	Prudentials - Reallocations	
	Apr 19	Operations – Miscellaneous* Settlements – TNSP	<ul style="list-style-type: none"> Rules consultation not required for Operations procedures, will likely provide impact assessments and drafts for comment

Discussion

- Suitability of procedures prioritisation
- Alternatives to procedures prioritisation

Approach to updating the bids and offers procedure

Michael Sanders

Context

- The bids/offers procedure specifies the required bidding format and system acknowledgements in the energy and FCAS markets
<http://www.aemo.com.au/-/media/Files/PDF/Participant-Input-Interface-EnergyMNSPFCAS-Bid-File-Submission.pdf>
- The shift from 48 to 288 trading intervals in a trading day opens up possibilities for making wider changes to bidding formats and systems
- Key issues for the dispatch focus group to consider include:
 - Possible provision of “sparse” bids for a trading day
 - Possible expansion of the REBIDEXPLANATION field
 - Possible changes to the default bidding procedures
 - Use of 5-minute data in 30-minute processes (pre-dispatch & ST PASA)

Proposed approach to Dispatch - bids/offers document

- Focus group members nominated by PWG and AEMO:
 - Timing - on or before Tue 7 August
 - Suitable candidates should have NEM trading expertise and knowledge of NER Chapter 3
- First dispatch focus group meeting to be held Tue 14 August:
 - Location – AEMO office, Sydney
 - Timing – 10am to 3pm
- Outcomes of focus group:
 - used by AEMO as input to decisions on any changes to bidding formats and systems
 - fed back to the PWG
- AEMO / PWG determine whether another focus group meeting is required
- Bids/offers procedure:
 - modified to reflect the shift to 288 trading intervals per trading day and any corollary changes to bidding formats and systems
 - released for comment, timing to be determined

Discussion

- PWG feedback on content of high level impact assessment (attached)
- PWG feedback on consultation approach
- Other comments

Approach to updating the metering procedures

David Ripper

Context

- The metering procedures facilitate the retail market functions related to metering provision, metering data collection, processing and delivery, metering data file formats, settlements and reporting.
- They are significant to the 5MS implementation as they contain the detail of the processes that will be changed to support the energy market transformation from 30 minute to five minute metering data.
- Key issues for the focus group to consider include:
 - AEMO to receive MDFF metering data files for settlements
 - Define MDFF interval file records for five minute metering data
 - Revise profiling and type 7 calculations for five minute metering data
 - Develop conversions for 30 and 15 minute to five minute metering data

Metering procedure changes – MDFFF Specification NEM12 and NEM13

Findings from HLIA

- Add in AEMO to list of MDFFF recipients.
- Add new format – if required.
- Interval metering data – add in 5-minute data.
- Define 5 minute start and end times.
- Remove MDM and net data file references.
- Produce example of 5 minute file.

Metering procedure changes – MDM Procedures and MDM File Format and Load Process

Findings from HLIA

- Load data – Reflect MDP Obligations from MDP SLP (current obligation to submit MDMT)
- Inclusion of new profile names
- Updated calculation methods for NSLP and CLP
- Reports – changes to reconciliation reports.
- Update any references of 30 minute data to 5 minute.

Metering procedure changes – Metrology Procedures: Part A

Findings from HLIA

- Section 3.7 – Potential noting of Data Storage assumptions
- Section 3.9 – Amend section based on new definition of a TI and interval energy data
- Section 7 – Reversion of Metering Installations types needs to be updated (removal of ability to replace a device that is capable of producing interval energy data and is already installed in a metering installation with a device that only procedures accumulated energy data).
- Section 12.8.2 – Requirements for CLP
- Include meter data storage exemption procedure – Legal to confirm that this procedure can be included within Metrology Proc: Part A.

Metering procedure changes – Metrology Procedures: Part B

Findings from HLIA

- Section 11 – Conversion of accumulated metering data:
 - Sample meters and controlled loads
 - Update Profile Preparation Service to 5-minute trading interval
- New Section for conversion of interval metering data (30-minute data to 5-minute and 15 minute to 5 minute)
- Unmetered load (type 7 metering installations) – metering data calculation
- Review linear interpolation substitution method – four trading intervals or two hours?

Metering procedure changes – Glossary and Framework

Findings from HLIA

- Addition of new Exemption Procedure - Metering Provider Data Storage Requirements (1.3, 2.2 (figure 2), 2.7.7, 5:glossary)
- Change to description of MDM Procedures (2.6.3) – conversion of meter readings to half-hourly data for settlements
- Change to description of Service Level Procedure – MDP (2.7.2) – refers to MDFF Specification (NEM12) – will need to add a new format (if required)
- Change to description of MDFF (4 (figure 3), 4.4.4) – addition of new format to document name (if required) and changes to MDM Data file
- Changes to Glossary (section 5):
 - BMP – basic meter profiler (refers to half-hourly)
 - Exemption Procedure – defined as existing exemption procedure
 - Interval – needs to be updated to reflect new rules definition of interval energy data
 - MDFF Specification – addition of new format if required
 - MDM Contributory Suffix – definition to be checked against changes to the NMI Procedure
 - MDM Data File – removal of MDM data file as standard file for delivery of metering data to AEMO
 - Change B2B definitions (if required)

Proposed approach for metering procedure changes

- Focus group members nominated by PWG and AEMO:
 - Timing - on or before Tue 7 August
 - Suitable candidates will have subject matter expertise in the Rules, Procedures and Guidelines relating to metrology and metering data provision.
- First metering procedures focus group meeting to be held Tue 15 August:
 - Location – AEMO office, Melbourne
 - Timing – 10am to 3pm
- Outcomes of focus group fed back into procedure development process and to the PWG
- Second metering procedures focus group meeting to be determined
- Formal consultation using the rules consultation procedure begins in September, concluding in January 2019

Discussion

- PWG feedback on content of high level impact assessment (attached)
- PWG feedback on consultation approach
- Other comments

General questions

Emily Brodie

Forward meeting plan

Emily Brodie

Upcoming meetings

- Procedures working group meetings for 2018:
 - Monday 20 August
 - Thursday 13 September
 - Thursday 11 October
 - Friday 16 November
 - Thursday 13 December
- Procedures focus groups:
 - Dispatch bids/offers - Tuesday 14 August, Sydney
 - Metering data - Wednesday 15 August, Melbourne
- Next Program Consultative Forum
 - Wednesday 8 August
- Next Executive Forum
 - Tuesday 11 September
- 5MS Meetings and Forum Dates: <http://aemo.com.au/Electricity/National-Electricity-Market-NEM/Five-Minute-Settlement>

A. Metering procedures packaging and prioritising

There are three packages of metering procedures:

1. Metering data
2. MSATS and SLPs
3. Miscellaneous

Packaging priority is based on IT system impact and to balance rules consultation resourcing requirements. Some procedures will also require updating for the outcomes of the Global Settlement rule change process. The Global Settlement final determination is expected to be published by the AEMC in November 2018.

Package	Document title / web link	Rules procedure?	5MS Impact
1. Metering data	MDFF Specification - NEM 12 and NEM 13	N	High
	MSATS Procedure: Metering Data Management (MDM) Procedures	Y	High
	MDM File Format and Load Process	N	Medium
	Metrology Procedure Part A	Y	High
1. Metering data (for 5MS) and 2. MSATS and SLPs (for GS)	Metrology Procedure Part B	Y	High
	Retail Electricity Market Glossary and Framework	Y	High
2. MSATS and SLPs	MSATS Procedure: National Metering Identifier	Y	High
	MSATS Procedure: Procedures for the Management of WIGS NMIS	Y	Medium
	MSATS Procedure: CATS Procedures Principles and Obligations	Y	Medium
	Exemption Procedure - Metering Provider Data Storage Requirements – new procedure to be developed	N	High
	Service Level Procedure: Metering Data Provider Services	Y	High
	Service Level Procedure: Metering Provider Services	Y	Medium
3. Miscellaneous	Metering Data Provision Procedures	Y	Medium
	Standing Data for MSATS	N	High
	Guide to MSATS and B2B Terms	N	Low

	MSATS -CATS Hints and Tips and NMI Discovery	N	Low
	Understanding Load Profiles Published from MSATS	N	Medium
	Guide to the Role of the Metering Coordinator (MC)	N	Low
	Accreditation Checklists - Metering Providers, Metering Data Providers & Embedded Network Managers	N	Medium
	Guidelines to the National Measurement Act	N	Low
	Special Sites and Technology Related Conditions within the National Electricity Market	N	Low
	Unmetered Load Guideline - Determination of Device Load and Annual Energy Consumption for Unmetered Device Types	N	Low

B. Settlements procedures packaging and prioritising

There are four packages of metering procedures:

1. Settlement residue auctions (SRA)
2. Estimations
3. TNSP residue procedure
4. Miscellaneous

Packaging based on priority, 'like' subject matter and to balance rules consultation resourcing requirements. Also, the SRA package needed early consideration as the first SRA auction for 2021Q3 units opens in September 2018.

Package	Document title	Rules procedure?	5MS Impact
SRA	Auction Participant Agreement	N	Medium
	Guide to the Settlements Residue Auction	N	High
	Methodology for the Allocation and Distribution of Settlement Residue	N	Low
	Settlements Residue Auction Rules	Y	Low
	Settlement Residue Distribution Assignment Guide	N	Medium
Estimations	NEM Settlement Estimates Policy	Y	High
	Settlement Estimation Guide	N	Low
TNSP	NEM Transmission Network Service Provider Negative Settlements Residue Procedure	Y	Medium
Miscellaneous	NEM Settlement Process	N	High
	NEM Settlements Revision Policy	Y	Medium
	Application of the GST to NEM Transactions	N	Low
	GST Information Note for Applicants	N	Low

	NEM Direction Compensation recovery	N	Low
	NEMAS Recovery Reconciliation File	N	Low
	Settlements Guide to Ancillary Service Payment and Recovery	N	Medium

C. Prudentials procedures packaging and prioritising

There are two packages of prudentials procedures:

1. Reallocations
2. Prudentials

Packaging based on 'like' subject matter.

Package	Document title	Rules procedure?	5MS Impact
Reallocations	Reallocation Procedure: Energy and Dollar Offset Reallocations	Y	High
	Reallocation Procedure: Swap and Option Offset Reallocations	Y	High
	Reallocation Timetable	N	Low
	SOOR Letter of Agreement	N	Low
	EDOR Letter of Agreement	N	Low
	EMMS Reallocations User Interface Guide	N	Low
Prudentials	Credit Limit Procedures	Y	High
	EMMS Prudential Forecast User Interface Guide	N	High
	NEM Prudential Dashboard Support Information	N	High
	NEM Credit Limit Procedure Training	N	Low
	Life of NEM Regional Model Data 2018	N	Medium
	MCL Calculator 2013WIN Examples 1, 2 and 3	N	Medium
	MCL Calculator 2018 Summer, Winter and Shoulder	N	Medium

D. Dispatch procedures packaging and prioritising

There are five packages of dispatch procedures:

1. Bids/Offers
2. Spot market
3. Pricing
4. Specifications
5. Miscellaneous

Packaging priority is based on IT system impact and to balance rules consultation resourcing requirements.

Package	Document title	Rules procedure?	5MS Impact
Bids/Offers	Participant Input Energy-MNSP-FCAS Bid File Submission	N	High
Spot market	Spot Market Operations Timetable	Y	Low
	SO_OP_3704 - Predispatch	N	Medium
	SO_OP_3705 - Dispatch	N	Medium
	Pre-Dispatch Process Description	N	Medium
Pricing	Operation of the intervention price provisions in the NEM	N	Low
	Estimated price methodology	Y	Medium
	RERT pricing methodology - included in Intervention Pricing Methodology	Y	Medium
	Intervention Pricing Methodology	Y	Medium
	Guide to Market Suspension Pricing Schedule	N	Medium
	Operation of the administered price provisions in the NEM	N	Medium
Specifications	MSNP Dispatch Issue - MSP NPL Model Business Specification	N	Low

	NEMDE Interconnector Non-Physical Loss Model Changes - Business Specification	N	Low
	Efficient Dispatch and Localised Recovery of Regulation Services Business Specification	N	Medium
Miscellaneous	Demand Terms in EMMS Data Model	N	Low
	Guide to Mis-pricing information resource	N	Low
	Treatment of Dispatchable Loads in NEM	N	Low
	Brief on Automation of Negative Residue Management	N	Medium

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	Participant Input Interface Energy-MNSP-FCAS Bid File Submission		
Rule Consultation Req.	No	Priority	Medium
Prepared by	Michael Sanders	Business Owner	IT
Consultation Group	Dispatch	Consultation Package	1. Dispatch – Bids / Offers
Link	http://www.aemo.com.au/-/media/Files/PDF/Participant-Input-Interface-EnergyMNSPFCAS-Bid-File-Submission.pdf		

Description of Document	Specifies the required bidding formats, validation processes and database bid updates in the energy and FCAS markets.		
Precedent Procedures / External Document	N/A	Dependent Procedures / External Document	N/A
Summary of Changes – Five Minute Settlements	<ul style="list-style-type: none">) Increase in trading intervals from 48 to 288.) Minor terminology changes: “trading interval” to “30-minute period”. 		
Summary of Potential Changes – Global Settlements	N/A		
External Stakeholder Impacted	Yes	AEMO Business Units Impacted	EMM, EMMS

Issues for Stakeholder Consultation	<p>Extension beyond the minimum Rule change requirements to specify:</p> <ol style="list-style-type: none"> 1. Possible provision of “sparse” bids for a trading day 2. Possible expansion of the REBIDEXPLANATION field 3. Possible changes to the default bidding procedures 4. Use of 5-minute data in 30-minute processes (pre-dispatch & ST PASA) <p>Note that only (1) and (2) are likely to be defined in the <i>Participant Input Interface Energy-MNSP-FCAS Bid File Submission</i>. (3) is currently defined in the <i>Spot Market Operations Timetable</i>. (4) would probably be defined in the <i>Pre-Dispatch Process Description</i>.</p>
System Impact	Yes

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	Meter Data File Format Specification NEM12 & NEM13		
Rule Consultation Req.	No	Priority	High
Prepared by		Business Owner	Metering
Consultation Group	Metering	Consultation Package	
Link	MDFP Specification		

Description of Document	<p>Specifies the MDFP for interval metering data (NEM12 File) and accumulated metering data (NEM13 File)</p> <p>The MDFP is used by Metering Data Providers for the provision of metering data to Service Providers and Registered Participants</p>		
Precedent Procedures / External Documents	SLP - MDP	Dependent Procedures / External Documents	
Summary of Changes – Five Minute Settlements	<p>Add in AEMO to list of parties who MDP send to (if required)</p> <p>Add new format – if required</p> <p>Interval metering data – add in 5-minute data</p> <p>Define 5 minute start and end times.</p> <p>Remove MDM and net data file references if required.</p> <p>Produce example of 5 minute file.</p>		
Summary of Potential Changes – Global Settlements	Add in AEMO to list of parties who MDP send to (if not already added in 5MS)		
External Stakeholder Impacted	Yes – MDP, Service Providers and Registered Participants	AEMO Business Units Impacted	
Issues for Stakeholder Consultation	Impacts of new format (NEM22) versus existing format (NEM12)		
System Impact	Yes		

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	MSATS Procedure: MDM Procedure		
Rule Consultation Req.	Yes	Priority	High
Prepared by		Business Owner	Metering
Consultation Group	Metering	Consultation Package	
Link	MSATS Procedure: MDM Procedure		

Description of Document	<p>The MDM Procedure details the management of metering data within MSATS in order to facilitate:</p> <ul style="list-style-type: none">) The implementation of the metrology procedure into AEMO's operational procedures) Efficient processes for: <ul style="list-style-type: none"> Z Transfer of data for market purposes Z Calculation and management of profiles Z Conversion of meter readings for settlements Z Reconciliation of participant data 		
Precedent Procedures / External Documents	Metrology Procedure	Dependent Procedures / External Documents	
Summary of Changes – Five Minute Settlements	<p>Load data – Reflect MDP Obligations from MDP SLP (current obligation to submit MDMT)</p> <p>Inclusion of new profile names</p> <p>Updated calculation methods for NSLP and CLP</p> <p>Reports – changes to reconciliation reports</p>		
Summary of Potential Changes – Global Settlements	<p>References to tier 1 etc:</p> <ul style="list-style-type: none">) 3.2.14 – tier 1 and tier 2 datastream) 3.12.14 and 3.12.16 Local retailer and second-tier aggregations 		
External Stakeholder Impacted	Yes - MDP	AEMO Business Units Impacted	Settlements
Issues for Stakeholder Consultation	Change of MDP obligation to submit MDMT		

System Impact	Yes
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Five Minute Settlements Project: High-Level Impact Assessment

Document Title	MDM File Format and Load Process		
Rule Consultation Req.	No	Priority	Medium
Prepared by		Business Owner	Metering
Consultation Group	Metering	Consultation Package	
Link	MDM File Format and Load Process		

Description of Document	Specifies the Meter Data Management (MDM) Format to be used by MDPs for the provision of metering data to AEMO. Also details the process for uploading the MDM files and the validations that occur when a file is submitted.		
Precedent Procedures / External Documents	MSATS MDM Procedure MDFF Specification	Dependent Procedures / External Documents	
Summary of Changes – Five Minute Settlements	Update any references of 30 minute data to 5 minute. Section 3.11 – May need to be updated if participants are to access/load meter data files outside of MSATS.		
Summary of Potential Changes – Global Settlements	Remove requirement for netted datastreams to AEMO, and any references to N datastream		
External Stakeholder Impacted	Yes – MDPs	AEMO Business Units Impacted	
Issues for Stakeholder Consultation			
System Impact	Yes		

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	Metrology Procedure: Part A National Electricity Market		
Rule Consultation Req.	Yes	Priority	High
Prepared by		Business Owner	Metering
Consultation Group	Metering	Consultation Package	1
Link	Metrology Procedure: Part A National Electricity Market		

Description of Document	<p>The metrology procedure applies to AEMO, registered participants, metering providers, and metering data providers, in relation to connection points in the NEM that may be classified as a first-tier load, second-tier load, market load, or intending load.</p> <p>The metrology procedure provides information on the application of metering installations to connection points, and sets out provisions for metering installations and metering data services.</p> <p>Part A includes:</p> <ul style="list-style-type: none">) Requirements for the provision, installation and maintenance of metering installations) The obligations of MCs, FRMPs, LNPS, MPs, MDPs and ENM) Responsibilities for metering data services) Minimum services specification procedures) Meter churn procedures) Network devices procedures) Emergency priority procedures 		
Precedent Procedures / External Documents	Service Level Procedures	Dependent Procedures / External Documents	
Summary of Changes – Five Minute Settlements	<p>Section 3.7 – Potential noting of Data Storage assumptions</p> <p>Section 3.9 – Amend section based on new definition of a TI and interval energy data</p> <p>Section 7 – Reversion of Metering Installations types needs to be updated (removal of ability to replace a device that is capable of producing interval energy data and is already installed in a metering installation with a device that only procedures accumulated energy data)</p> <p>Section 12.8.2 – Requirements for CLP</p> <p>Include meter data storage exemption procedure – Legal to confirm that this procedure can be included within Metrology Proc: Part A.</p>		

Summary of Potential Changes – Global Settlements	Removal of LR, first-tier and second-tier Requirements for unmetered off market loads		
External Stakeholder Impacted	Jurisdictions, Metering Data Providers, Metering Providers	AEMO Business Units Impacted	
Issues for Stakeholder Consultation	Controlled Load Profile and sample meters		
System Impact	Yes		

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	Metrology Procedure: Part B: Metering Data Validation, Substitution and Estimation		
Rule Consultation Req.	Yes	Priority	High
Prepared by		Business Owner	Metering
Consultation Group	Metering	Consultation Package	
Link	Metrology Procedure: Part B		

Description of Document	<p>The metrology procedure applies to AEMO, registered participants, metering providers, and metering data providers, in relation to connection points in the NEM that may be classified as a first-tier load, second-tier load, market load, or intending load.</p> <p>Part B includes procedures for:</p> <ul style="list-style-type: none">) The validation and substitution of metering data) The estimation of metering data) The method by which accumulated metering data is converted by AEMO into trading interval metering data) Method by which calculated metering data is produced for unmetered market loads) Requirements regarding sample meters for controlled loads 		
Precedent Procedures / External Documents	Metrology Procedure: Part A	Dependent Procedures / External Documents	MDM Procedure
Summary of Changes – Five Minute Settlements	<p>Section 11 – Conversion of accumulated metering data:</p> <ul style="list-style-type: none"> - Sample meters and controlled loads - Update Profile Preparation Service to 5-minute trading interval <p>New Section for conversion of interval metering data (30-minute data to 5-minute and 15 minute to 5 minute)</p> <p>Unmetered load (type 7 metering installations) – metering data calculation</p> <p>Review linear interpolation substitution method – four trading intervals or two hours?</p>		

Summary of Potential Changes – Global Settlements	Addition of processes for off-market unmetered loads		
External Stakeholder Impacted	Jurisdictions, Metering data providers	AEMO Business Units Impacted	
Issues for Stakeholder Consultation	Controlled Load Profile and sample meters Unmetered off market load (GS)		
System Impact	Yes		

Five Minute Settlements Project: High-Level Impact Assessment

Document Title	Retail Electricity Market Glossary and Framework		
Rule Consultation Req.	Yes	Priority	High
Prepared by	Kerry Galloway	Business Owner	Metering
Consultation Group	Metering	Consultation Package	All
Link	Retail Electricity Market Glossary and Framework		

Description of Document	Forms part of each of the Retail Electricity Market Procedures. Contains a dictionary of terms used with the Procedures and a description of each Procedure and supporting documentation, and how they fit together.		
Precedent Procedures / External Documents	All Retail Electricity Market Procedures	Dependent Procedures / External Documents	
Summary of Changes – Five Minute Settlements	<p>Changes to be made to be consistent with changes to Precedent Procedures:</p> <ul style="list-style-type: none">) Addition of new Exemption Procedure - Metering Provider Data Storage Requirements (1.3, 2.2 (figure 2), 2.7.7, 5:glossary)) Change to description of MDM Procedures (2.6.3) – conversion of meter readings to half-hourly data for settlements) Change to description of Service Level Procedure – MDP (2.7.2) – refers to MDFF Specification (NEM12) – will need to add a new format (if required)) Change to description of MDFF (4 (figure 3), 4.4.4) – addition of new format to document name (if required) and changes to MDM Data file) Changes to Glossary (section 5): <ul style="list-style-type: none"> Z BMP – basic meter profiler (refers to half-hourly) Z Exemption Procedure – defined as existing exemption procedure Z Interval – needs to be updated to reflect new rules definition of interval energy data Z MDFF Specification – addition of new format if required Z MDM Contributory Suffix – definition to be checked against changes to the NMI Procedure Z MDM Data File – removal of MDM data file as standard file for delivery of metering data to AEMO Z Change B2B definitions (if required) 		

Summary of Potential Changes – Global Settlements	Changes to be made to be consistent with changes to Precedent Procedures, potential changes include <ul style="list-style-type: none">) Removal of LR, first tier and second tier – and impacted definitions (section 5 Glossary)) Additional of new document describing process for unmetered off market loads 		
External Stakeholder Impacted	No – changes made in precedent procedures	AEMO Business Units Impacted	No – changes made in precedent procedures
Issues for Stakeholder Consultation	None – changes made in precedent procedures		
System Impact	No – changes made in precedent procedures		