5MS/GS Transition Focus Group #5:
Implementing the Metering transition plan

Friday 28th February, 2020

AEMO OFFICES:

Adelaide: Level 9, 99 Gawler Place

Brisbane: Level 10, 10 Eagle St

Melbourne: Level 22, 530 Collins St

Sydney: Level 2, 20 Bond St

PLEASE NOTE THIS MEETING WILL BE RECORDED FOR THE PURPOSE OF PREPARING MINUTES

This slide pack was developed for the Transition Focus Group meeting. This version of the slides has been annotated with notes from the meeting. These additional notes either in blue text or are on new slides that have a yellow background.

Attendees

Attendee	Organisation	Attendee	Organisation
Dino Ou	Endeavour Energy	David Ripper	AEMO
Linda Brackenbury	Plus ES	Greg Minney	AEMO
David Woods	SAPN	Austin Tan	AEMO
Steve Smith	Metering Dynamics	Emily Brodie	AEMO
Jonathan Briggs	Metering Dynamics	Blaine Miner	AEMO
Cindy Matthews	Metering Dynamics	Justin Stute	Mondo
Mario Iogha	Origin Energy	Jeff Roberts	EvoEnergy
Paul Greenwood	Vector	Mark Pilkington	Citipower Powercor
Jon Ham	EnergyAustralia	Con Michailides	Ausnet
James Ley	EnergyAustralia	Matthew Mullen	Jemena
Pieter Wijtzes	AGL	Graeme Wriedt	Jemena
Snehal Jogiya	ERM/Powermetric	Aakash Sembey	Simply Energy
Nicole Bright	Energy Queensland	Ingrid Farah	Ergon Energy
Jane Hutson	Energy Queensland	Paul Willacy	Aurora

Consolidated Actions

	Section	Action	Responsibility	Due date
1	5min data delivery agreements	AEMO to include reference to type 7 metering in the 'context slide'	AEMO	Completed
2	5min data delivery agreements	Participants to seek Legal advice as required in relation to NER 7.10.5.	Participants	At participants' discretion
3	5min data delivery agreements	Participants to engage other Participants early to discuss the potential delivery of 5-min metering data pre-1 July 2021.	Participants	At participants' discretion
4	5min data delivery agreements	Participants to advise AEMO when they believe they will deliver or receive 5-min metering data.	Participants	Tue 31 Mar
5	5min data delivery agreements	AEMO to publish list of participants' intentions on their timing for delivering or receiving 5-minute metering data.	AEMO	Thu 9 Apr
6	5-min metering data delivery for Type 4/4A…	AEMO and TFG to monitor and consider implications of changes being discussed in the ERCF	AEMO & Participants	Ongoing
7	Non-contestable unmetered loads	AEMO to confirm number of prospective days a datastream can be created	AEMO	As per CATS procedure, prospective days = 65 business days
8	Tier 1 basic meters	Participants to determine if additional support is required from AEMO to complete these MTP activities	Participants	Tue 31 Mar
9	Tier 1 basic meters	Participants to determine if specific CR notification considerations should be applied to these updates	Participants	Tue 31 Mar

Consolidated Actions cont.

	Section	Action	Responsibility	Due date
10	Alignment of meter RegisterIDs and Suffixes	AEMO and Participants to monitor discussions at the ERCF and Standing Data Review which may impact TFG considerations	AEMO & Participants	Ongoing
11	Alignment of meter RegisterIDs and Suffixes	Participants to raise items which need to be considered for this MTP activity	Participants	Tue 31 Mar
12	Updates to GLOPOOL	Participants to provide feedback regarding AEMO proposal and engagement with the SWG	Participants	Tue 31 Mar
13	Updates to the MTP	AEMO to update Special Sites and VIC TUoS items in the MTP	AEMO	Updated
14	Next Steps	AEMO to add an 'approach' column into the MTP to communicate agreed methodologies/options in delivering a particular activity	AEMO	Complete

Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE
Preliminary Matters			
1	10:00 - 10:10	Welcome and introduction	Greg Minney
2	10:10 – 11:20	Metering data delivery	Blaine Miner/ Greg Minney
		11:20 – 11:35 BREAK	
3	11:35 – 12:35	MSATS standing data	Blaine Miner/ Greg Minney
4	12:35 - 12:50	Updates to the MTP	Blaine Miner/ Greg Minney
5	12:50pm – 1:00pm	Next steps and general questions	Greg Minney
	APPENDIX	Refresher on 5MS and GS metering and metering data obligations	

Introduction

Greg Minney

Background

- 5MS/GS Metering transition plan (MTP) was developed by AEMO and industry over past 6 months (Sep 2019 – Feb 2020).
- The MTP:
  - Outlines expected responsibilities, activities, dependencies and timeframes for the metering transition
  - Provides the framework for the metering component of participant progress and readiness reporting for 5MS/GS
- 'Final' plan published 7 Feb 2020. Includes minimum 5MS/GS Readiness Working Group (RWG) review points:
  - June 2020
  - October 2020
  - April 2021
- At February meeting, RWG requested the TFG convene soon to discuss the implementation of aspects of the MTP.

Session objectives and expectations

- Focus on ‘how’ to implement MTP, mainly the topics raised by participants
  - ‘who’, ‘what’ and ‘when’ have been consulted
- Focus on key topics
  - May not resolve all issues in meeting
  - Develop a roadmap for resolving outstanding issues
- Confirm next steps

Metering data delivery

Blaine Miner

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Agreements to allow 5-min data delivery prior to 1 July 2021

Context

- NER 7.10.5 Periodic energy metering

  (a) The *Metering Data Provider* must, for type 1, 2, 3, 4, 4A and 5 *metering installations*, collate *metering data* relating to:

  (1) the amount of *active energy*; and

  (2) reactive energy (where relevant) passing through a *connection point*,

  in *trading intervals* within a metering data services database unless it has been agreed between AEMO, the *Local Network Service Provider, Embedded Network Manager* in relation to child connection points and the *financially responsible Market Participant* that metering data may be recorded in sub-multiples of a *trading interval*.

  (b)…

  (c) The *Metering Data Provider* must, for type 7 *metering installations*, prepare *metering data* relating to the amount of *active energy* passing through a *connection point* in accordance with clause 7.10.1(a)(4) in *trading intervals* within a metering data services database.

- MTP activities
  - B2B - A32, A37, A42, A47, A53, A59, A65, A71 and A84
  - B2M - A34, A39, A44, A49, A55, A61, A67, A73 and A85

Considerations

- How and when will these agreements get established?
- Who will likely be the initiating party?
- What will be the likely structure/approach of the agreements? e.g. individual NMI basis or based on jurisdictional/groups of NMIs?

NOTES & ACTIONS: Agreements to allow 5-min data delivery prior to 1 July 2021

Notes

- Some Participants already have aggregation agreements in place today which could be used as a template for 5-min related agreements.
- Participants should seek their own Legal advice regarding NER 7.10.5.
- The majority of Participants (Retailer / DNSP) indicated that they will not be seeking to receive 5-min metering data via B2B prior to 1 July 2021.
- AEMO and a portion of Participants (Retailer) reconfirmed that they will be seeking 5-min metering data prior to 1 July 2021.
- Agreements for B2B purposes are separate to those entered into for B2M purposes.
- LRs should seek their own Legal advice regarding any consequences associated to an agreement being entered into between the required Parties under NER 7.10.5. i.e. would MDPs still need to deliver 30-min metering data to the LR up until 1 July 2021 or would they only be required to deliver the agreed 5-min trading intervals.
- TFG attendees were comfortable with AEMO capturing when and which Participants intend delivering or receiving 5-min metering data prior to 1 July 2021

Actions

- AEMO to include reference to type 7 metering in the 'context slide' – complete see above
- Participants to seek Legal advice as required in relation to NER 7.10.5.
- Participants to engage other Participants early to discuss the potential delivery of 5-min metering data pre-1 July 2021.
- Participants to advise AEMO when they believe they will deliver or receive 5-min metering data.
- AEMO to publish list of participants' intentions on their timing for delivering or receiving 5-minute metering data.

Transition to 5-min metering data delivery for Type 4/4A and VIC AMI

Context

- 5MS rule
  - All new and replacement metering installations, other than type 4A, installed from 1 December 2018 to provide five-minute data from 1 December 2022 at the latest.
  - All new and replacement type 4A metering installations installed from 1 December 2019 to provide five-minute data from 1 December 2022 at the latest.
  - This will likely result in 100s of thousands of meters having to deliver 5-min metering data from 1 December 2022 at the latest
- MTP activities
  - B2B - A54, A60 and A66
  - B2M - A56, A62 and A68

Considerations

- MDP Rollout plans
  - Current MTP: MDPs to provide AEMO the rollout plan for these meters by 30 Jun 2020
- MDP approaches
- Potential support activities from AEMO or other participants?
- Specific CATS CR and Notification management requirements?

NOTES: Transition to 5-min metering data delivery for Type 4/4A and VIC AMI

Notes

- MDPs committed and on-track to deliver 'rollout' plans to AEMO and Industry by 1 July 2021
- Most large MDPs expecting to start converting and delivering 5-min metering data for these metering types from late 2021 or early/mid 2022 (over 500k meters to be converted in Vic alone)
- Only 'required meters' under the 5MS Rule expected to be converted i.e. no pre-1 Dec 2018 type 4 meters are expected to be converted
- Retailers and distributors are concerned about CATS CR notification volumes
- Discussion occurred re potential CR transactions e.g. CR3000, CR4000 and CR5000 series
  - CR volumes may also be impacted by ERCF proposals, e.g.:
    - 'Meter Read Type' field to communicate meter trading interval length (RWD5)
    - Application of ADLs at Register level
- Each MDP Rollout plan is to include: transition window, volumes, ramp rates and overall approach e.g. jurisdictional, distribution area, Retailer.
- Need to mange CRs to ensure critical notifications are not delayed e.g. associated to customer transfers
- Participants happy and encouraged by the transparency the MDPs are demonstrating

Actions

- AEMO and TFG to monitor and consider implications of changes being discussed in the ERCF

MSATS standing data

Greg Minney

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Non-contestable unmetered loads: standing data creation

Context

- **GS rule**: Requires AEMO to include in its metrology procedures guidance for the inclusion of non-contestable unmetered loads in settlement, including the creation of NMIs for non-contestable unmetered loads
- **MTP activities**:
    - A99/100/101, A104/105

Considerations

- Preferred NMI Classification Code transition windows
    - 1 May 2021 or from the implementation of AEMO's MDM solution (Dec 2020)
- Impacts on the networks BAU NMI creation processes
    - One step vs two step process NMI creation process
- Specific CATS CR and Notification management requirements?

NOTES: Non-contestable unmetered loads: standing data creation

Notes

- Discussed advantages and disadvantages of DBs applying a 1 step vs a 2 step process in creating NCUL NMIs
  - 1 Step – Wait for new NMI Classification Code to be available and then create required NMIs
  - 2 Step – Create NMIs as per BAU NMI create processes and then update NCC when code becomes available
- Participant raised that a 2 step process may introduce transfer risk i.e. if a NCUL NMI is created with an NCC of 'Small', they may be transferred to another Retailer in error
- AEMO suggested that having the transition start date, for the NCUL NCC, inline with AEMO's MDM Release date (Dec 2020), strikes the right balance between minimising DB disruption and mitigating other risks such as transfer risk and implementation risk
- Discussed the timing and approach for the associated datastream records
  - 'Active' Datastreams to be created with a prospective start date of 1 July 2021 or as 'Inactive' earlier with a status update to occur prior to 1 July 2021
- Datastreams and meters to be created in the CRI and CNDS tables in a similar manner to type 7 loads

Actions

- AEMO to confirm number of prospective days a datastream can be created

Tier 1 basic meters: datastream creation and data delivery

Context

- **GS rule**: Tier 1 basic meter data will be used in settlement process to calculate UFE
- **MTP**: delivery of Tier 1 basic metering data by 1/4/21 to ensure availability of all metering data by 1/7/21
- Activation of the relevant Tier 1 metering datastreams is a pre-requisite for delivery of associated metering data
- **MTP activities**:
  - A117 – Consider process for activating Datastreams
  - A118 – Create/ Activate tier 1 basic datastreams as required
  - A93 – Delivery of tier 1 basic meter data

Considerations

- MDP process for creation and activation of datastreams
- MDP migration approach and timing
- Support activities?
- Specific CATS CR and Notification management requirements?

NOTES: Tier 1 basic meters: datastream creation and data delivery

Notes

- QLD basic meter datastreams are already in MSATS and are Active
- NSW DB noted that they will active their datastreams from Mar/Apr this year
- Other MDPs looking to have datastreams created and activated by mid this year
- AEMO not aware of any additional support activities required of AEMO
- Updates to be managed through BAU CR transactions, potential notification management requirements still to be determined

Actions

- Participants to determine if additional support is required from AEMO to complete these MTP activities
- Participants to determine if specific CR notification considerations should be applied to these updates

Alignment of meter RegisterIDs and Suffixes for interval meters

Context

- Standing Data for MSATS procedure v5.0:
  - For Interval Meters, the RegisterID must match the content of the 'Suffix' within the CATS_REGISTER_IDENTIFIER table. E.g. 'E1', 'B1', 'Q1', 'K1', etc.
- MTP activities
  - A122

Considerations

- Data alignment approach including timings
  - MDP and MP communication
- Potential support activities?
- Specific CATS CR and Notification management requirements?

NOTES: Alignment of meter RegisterIDs and Suffixes for interval meters

Notes

- Not required by AEMO to support Settlement and Prudential activities
- Participant mentioned that the MSATS Standing Data Review may result in the Register ID being removed from the CRI table
- Until the requirement has been removed, we need to plan for an appropriate transition e.g. timing and preferred approach
- CR notification management needs to be a critical consideration

Actions

- AEMO and Participants to monitor discussions at the ERCF and Standing Data Review which may impact TFG considerations
- Participants to raise items which need to be considered for this MTP activity

Updating LR and FRMP fields to GLOPOOL for existing NMIs (1/2)

Context and proposed approach

- To support GS, all Distribution Network Connection Points* will have their Local Retailer (LR) participant ID updated to "GLOPOOL".
- Since the LR will not be responsible for all energy entering or leaving the Local Area the Financial Responsible Market Participant (FRMP) will be updated on the following connection points:
  - TNI Connection Points
  - Cross Boundary Connection Points
- AEMO intends to perform a bulk update (TBC) on the LR Participant ID on all Distribution connection points in MSATS Production to support the GS cutover.
- Due to the number of changes, NO notifications* will be provided to market participants for the bulk LR role changes
  - FRMP to be provided a reconciliation file
- It will be the Participants' responsibility to update their systems to reflect the LR participant ID change
- MTP activities:
  - A116- Update LR and FRMP

** Transmission Network Connection Points (including Bulk Supply Points) will retain the 'POOL%' ID in the LR role*

** Embedded Network Child Connection Points will retain the Embedded Network Parent FRMP ID in the LR role*

Updating LR and FRMP fields to GLOPOOL for existing NMIs (2/2)

Considerations

- Specifics of bulk change approach to be determined but will operate in accordance with the approach outlined
- Further approach scoping to involve SWG input
- Approach to communication of updates
- Alignment of participant and AEMO updates and transaction processing implications
- Support activities
- CR and Notification management
  - Note approach proposed does not envisage CR generation.

NOTES: Updating LR and FRMP fields to GLOPOOL for existing NMIs

Notes

- Updates to be effective 6 Feb 2022 and run as part of GS go-live process
- AEMO's proposed approach is for AEMO to perform the updates through a bulk update mechanism and suppress CR notifications.
  - Update logic to be provided to Participants
  - AEMO to confirm approach to in-flight CR's at time of cutover
  - Reconciliation file to be provided to FRMP
    - AEMO to consider if other reconciliation files required
  - Participant suggested that reconciliation file could contain only NMIs where the LR does not equal GLOPOOL e.g. embedded network NMIs to reduce file volumes
- Specific IT approach to be worked through with the SWG
- AEMO confirmed that MSATS validations will be in place, from 6 Feb 2022, to ensure accurate LR and FRMP (e.g. for Bulk NMIs) maintenance from this date

Actions

- Participants to provide feedback regarding AEMO's proposal and engagement with the SWG

Updates to the MTP

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Updates to the MTP

Registered special sites

- Additional MTP activity for 5MS
  - How special sites are *not* types 1-3 and subset of 4?

VIC TUoS

- Additional MTP activity for MDPs to clarify VIC TUoS metering data delivery
- Current processes will continue through transition, noting that VIC TUoS is already delivered in MDFF

Other…??

NOTES: Updates to the MTP

Notes

- AEMO noted the following up dates to the MTP:
  - Missing content will be added to the Special Sites MTP activity (A31)
  - An additional activity will be added to the VIC TUoS sub-category (S39) to specify ongoing MDFF delivery to AEMO (status quo)
    - Participant asked if only one file will be required to support VIC TUoS activities from the implementation date of AEMO's MDFF capability

Actions

- AEMO to update Special Sites and VIC TUoS items in the MTP

Next steps and general questions

Greg Minney

Reflection on session objectives

- Focus on ‘how’ to implement MTP, mainly the topics raised by participants
  - ‘who’, ‘what’ and ‘when’ have been consulted
- Focus on key topics
  - May not resolve all issues in meeting
  - Develop a roadmap for resolving outstanding issues
- Confirm next steps

Next steps

- Meeting outcomes and actions to be circulated to TFG and RWG
- Any MTP changes to be presented to the RWG for their consideration

NOTES: Next steps

Notes:

- TFG expected to meet periodically to consider progress and changes to the MTP

Actions:

- Notes and actions from this TFG to be circulated
- AEMO to add an ‘approach’ column into the MTP to communicate agreed methodologies/options in delivering a particular activity

General questions

Thank you for your attendance and participation!

APPENDIX:

Refresher on 5MS and GS metering and metering data obligations

5MS Metering installation requirements

Metering Type	Requirement	Date
Types 1, 2, 3 and 7	• Must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data.	By 1 July 2021
Subset of Type 4*	• Must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data.	By 1 July 2021
Types 4, 4A and 5	• All new or replacement metering installations (other than type 4A metering installations) installed from 1 December 2018 must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data. • All new or replacement type 4A metering installations installed from 1 December 2019 must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data.	By 1 Dec 2022

Note:
AEMO may grant an exemption where 1 type 1, 2, 3 or subset of type 4 meter is not quite capable of storing 35 days of metering data (i.e. 30-34 days) if it is reasonably satisfied that the Metering Provider will be able to otherwise satisfy the requirements of Chapter 7.

* Subset type 4 meters definition:

- Type 4 metering installations at a:
  - Transmission network connection point; or
  - Distribution network connection point where the relevant financially responsible Market Participant is a Market Generator or Small Generation Aggregator

5MS/GS metering data delivery to AEMO

Topic	Requirement	Date
File Format	• MDFF NEM12 files to be the required file format • For all interval metering data being delivered to AEMO • MDFF NEM13 files to be supported by AEMO • MDMF files for basic meter reads will continue to be supported and accepted	From 1 July 2021

Granularity	• NEM12 interval metering data to be:
	  • Delivered at the register level (E, B, Q and K)
	  • NEM12 200 records must be accurate
	  • As per the meter's trading interval configuration i.e. 5, 15 or 30-minute intervals
		From 1 July 2021

Energy	• Metering data which must be sent to AEMO:
	  • Import and Export Active energy (kWh) (E and B)
	  • Import and Export Reactive energy (kVarh) (Q and K), where applicable
	• All other forms of measurement (such as volts and amps) are not required to be delivered to AEMO but will be processed if they are provided.
		From 1 July 2021

5MS/GS: MSATS datastream standing data

Metering Type	Requirement	Date
Types 1, 2, 3 and 7	• Net datastreams (N1) must be converted to Register level datastreams (E1, B1, etc.)	By 1 July 2021
Subset of Type 4*	• Net datastreams (N1) must be converted to Register level datastreams (E1, B1, etc.)	By 1 July 2021
Types 4, 4A and 5	• All new records relating to interval meters must be created at the register level e.g. E and B. • Existing net datastream records can remain active post 1 July 2021, until an update to the datastream record is required e.g. meter replacement. Where an update is required to a CNDS record, the net datastream record is to be inactivated and any new active datastreams records are to be created at the register level. • Datastreams associated with import and export reactive energy e.g. Q and K must be created in the CNDS table if they exist in the CRI table. • Datastreams must be established in a manner that ensures they are not included in market settlements.	From 1 July 2021
Basic Meters	• All 1st tier datastreams must be activated and meter reads delivered to AEMO, for UFE purposes	By 1 July 2021

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5MS/GS:
MSATS standing data - general

By 1 July 2021

- Non-contestable unmetered load (NCONUML) NMIs and associated standing data created in MSATS
- NMI Classification Code updates, for affected existing NMIs, to reflect the new code requirements

NMI Classification Code	Description
BULK	*Connection point* where a *transmission network* connects to a *distribution network* - also termed 'Bulk Supply Point'
DWHOLSAL	*Distribution network connection point* where energy is directly purchased from the *spot market* by a *Market Customer*
NCONUML	*Non-contestable unmetered load*
NREG	*Connection point* associated with a *non-registered embedded generator*, i.e. a *generating unit* that is not classified by a *Market Generator*, but may be classified by a *Small Generation Aggregator* as a *market generating unit*.
WHOLESAL	*Transmission network connection point* where energy is directly purchased from the *spot market* by a *Market Customer*
XBOUNDRY	*Connection point* where a *distribution network* connects to another to *distribution network*


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