

# 5MS/GS Transition Focus Group #6: *Implementing the Metering transition plan*

Monday 6<sup>th</sup> April, 2020

**WEBEX ONLY**

*[Details in calendar invitation]*

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

# Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE
<b>Preliminary Matters</b>			
1	10:00 - 10:10	Welcome and introduction	Greg Minney
2	10:10 – 10:25	Notes/actions from previous meeting	Greg Minney
<b>For noting</b>			
3	10:25 – 10:30	Changes to the MTP since the previous meeting	Blaine Miner
4	10:30 – 10:45	Transition of Net datastreams to register level datastreams	Blaine Miner
5	10:45 – 10:50	Accreditation update activities	Craig Shelley
<b>For discussion</b>			
6	10:50 – 11:00	Changes to AEMO's Meter Data Validation Framework	Simon Tu
7	11:00 – 11:30	MTP activities: <ul style="list-style-type: none"> <li>Clarifying activity intent</li> <li>Clarifying approach</li> </ul>	Greg Minney Blaine Miner Paul Lyttle
<b>BREAK 11:30 – 11:40</b>			
8	11:40 -12:40	MTP activities continued	Greg Minney and Blaine Miner
9	12:40 – 12:55	Readiness reporting: <ul style="list-style-type: none"> <li>How to reflect progress in responses</li> <li>Upcoming activities</li> </ul>	Austin Tan
<b>General business</b>			
10	12:55 – 13:00	Next steps and general questions	Greg Minney
	<b>APPENDIX</b>	Refresher on SMS and GS metering and metering data obligations	

# Introduction

Greg Minney

# 5MS/GS and Covid-19 implications

- Risk was raised at March PCF in relation to the impact Covid-19 may have on Industry's and AEMO's 5MS and GS implementation programs
- Risk was discussed at Executive Forum in March and the following actions were taken:
  - Risk to be monitored through PCF
  - Question(s) to be added to the Industry Readiness Questionnaire in relation to the impacts of Covid-19 and the mitigation measures
- PCF discussion on industry impact this Thursday, 9 April

This TFG meeting will focus on 5MS/GS implementation given that COVID-19 discussions are currently being managed by the PCF.

# Session objectives and expectations

- Increase clarity and understanding of activities in the MTP
- Confirm those areas where:
  - AEMO support may be required by participants
  - Implementation approaches to activities need elaborating
- Share plans and approaches across impacted participants
- Support ongoing participant work programs
- Confirm next steps for TFG

# Notes and actions from previous meeting

Greg Minney

# Actions from TFG #5 (28 Feb 20)

## – 1/3

Topic	Action	Responsibility	Response
5min data delivery agreements	AEMO to include reference to type 7 metering in the 'context slide'	AEMO	Complete
	Participants to seek Legal advice as required in relation to NER 7.10.5.	Participants	Ongoing - Close
	Participants to engage other Participants early to discuss the potential delivery of 5-min metering data pre-1 July 2021.	Participants	Ongoing – Close
	Participants to advise AEMO when they believe they will deliver or receive 5-min metering data.	Participants	<b>6 responses received:</b> <ul style="list-style-type: none"> <li>3 retailers indicated they will start receiving 5-min data from 1 Jul 2021</li> <li>1 retailer and 1 DNSP indicated they will be able to receive 5-min data from approx. Q1, 2021</li> <li>1 MDP indicated it will be able to send and receive 5-min data from Nov 2020, and will aggregate to 15-min or 30-min data as required until 1 Jul 2021 or thereafter.</li> </ul>
	AEMO to publish list of participants' intentions on their timing for delivering or receiving 5-minute metering data.	AEMO	Responses from most TFG members still outstanding
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
Non-contestable unmetered loads	AEMO to confirm number of prospective days a datastream can be created	AEMO	Complete

# Actions from TFG #5 (28 Feb 20)

## – 2/3

Topic	Action	Responsibility	Response
Tier 1 basic meters	Participants to determine if additional support is required from AEMO to complete these MTP activities	Participants	<b>5 responses received:</b> <ul style="list-style-type: none"> <li>3 advised that no additional support needed</li> <li>1 retailer needs advanced notice of <u>MC/MP</u> plans for installations/reconfigurations (has system dependencies), but did not indicate the need for additional support from AEMO</li> <li>1 indicated it would seek assistance at a later time if required</li> </ul>
	Participants to determine if specific CR notification considerations should be applied to these updates	Participants	<b>5 responses received:</b> <ul style="list-style-type: none"> <li>No specific CR notification considerations raised</li> </ul>
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
	Participants to raise items which need to be considered for this MTP activity	Participants	<b>6 responses received:</b> Items to be discussed in this TFG



# Actions from TFG #5 (28 Feb 20)

## – 3/3

Topic	Action	Responsibility	Response
Updates to GLOPOOL	Participants to provide feedback regarding AEMO proposal and engagement with the SWG	Participants	<b>6 responses received:</b> Items to be discussed in this TFG
Updates to the MTP	AEMO to update Special Sites and VIC TUoS items in the MTP	AEMO	Complete
Next Steps	AEMO to add an 'approach' column into the MTP to communicate agreed methodologies/options in delivering a particular activity	AEMO	Complete

# Updates to the MTP

Blaine Miner

# Updates to the MTP since previous meeting

Update	SC / Activity References	Reasoning
Aligned the 'Transition Start Dates' relating to the creation of register level datastreams to AEMO being able to receive MDFF (1 Feb 2021)	A36, A40, A45, A51, A57, A63, A69, A75, A81	The creation of register level CNDS records introduces the requirement for MDPs to provide register level metering data for that meter to AEMO. This cannot occur if AEMO's MDFF capability is not available.
Subcategory relating to the meter data delivery of 'Pre-1 Dec 2018/19 Type 4, 4A, VICAMI and SAMPLE meters' has been removed	SC21	This meter 'group' is not relevant to 5MS Readiness. Should any of these meters be replaced they would then be captured under other existing SCs (SC17-20)
SC relating to the requirement to complete a data cleanse of RegisterIDs and 'Suffixes' has been moved to the activity level under each applicable meter type	Removed - SC40 Added - A36a, A40a, A45a, A57a, A63a, A69a, A75a, A81a	By placing this requirement at the activity level, against each applicable meter type, it allows for the application of the appropriate transition end date e.g. Type 1-3, subset of 4 to be cleansed by 31 May 2021 vs Type 4 to be cleansed by 15 Jan 2022
Updated 'Transition End Dates' to 30 Nov 2022 for meter types that must deliver 5min metering data by 1 Dec 2022 (includes B2B and B2M related activities)	A54, A56, A60, A62, A66, A68	To align to the 5MS Rule requirements

# Transition of Net datastreams to register level datastreams

Blaine Miner

# Context

- With the introduction of the 5MS & GS Rule requirements, a more granular and global source of reference data is required.
- To support this requirement, Net CNDS records will be gradually replaced by Register Level CNDS records.
- AEMO will be publishing a clarification document shortly to provide specific guidance on how this transition will occur.

## **Current Service Level Procedure: MDP Services requirement (3.7.1):**

(e) aggregate interval metering data for a connection point into a 30-minute interval net Datastream prior to delivery to AEMO as required by the MSATS Procedures, MDM Procedures and NMI Procedures;

## **New 5MS Service Level Procedure: MDP Services requirement (2.4.1):**

(v) for Datastream Suffix(s) corresponding to interval metered connection points, update the Datastream Suffix value from 'N' to Register level (E1,B1) when:

(A) a new metering installation is installed at a connection point; or

(B) a configuration within an existing meter or metering equipment is updated.

# AEMO CNDS & Meter Data Clarifications Overview

This clarification document will include:

- Background
  - 5MS Rule
  - CATS CNDS Table
  - Key Metering 'Go-live' dates
- CNDS Records
- CNDS DataStreamType Codes
- ADL in CNDS
- CNDS & Meter Data Delivery
- CNDS & Procedures
- Scenarios - Net & Register level CNDS records

# Examples of some of the clarifications

- Active Net CNDS records will still exist in some instances post 1 July 2021
- Net CNDS record must be deactivated with an end date prior to the effective date of the Register Level CNDS record
- Net CNDS records cannot be created from the start of 5MS, currently scheduled for 1 July 2021, with an effective date equal to or greater than 1 July 2021
- An Interval Register Level CNDS record cannot be replaced by a Net CNDS record
- Interval Register Level CNDS records must reflect a DatastreamType of 'I', 'P' or 'N'.
- Once an interval Register Level CNDS record has been created, an MDP must send AEMO meter data in MDFF from the date the Register Level CNDS record was created.
- AEMO's preference is for MDPs to transition Net records to Interval Register level CNDS records as soon as possible, after the AEMO MDFF Go-Live (~1/2/21)

AEMO Process	Mandatory CNDS Records (as per NMI Procedures)
NEM Settlements	DatastreamSuffix = 'E', 'B', 'A' & 'D'
UFE Analysis	DatastreamSuffix = 'Q', 'K', 'P' & 'J'
VIC TUoS: NEM Settlements	DatastreamSuffix = 'E', 'B', 'A' & 'D'
VIC TUoS: UFE analysis	DatastreamSuffix = 'Q', 'K', 'P' & 'J'
VIC TUoS: Billing	DatastreamSuffix = 'F', 'C', 'R' & 'L'

# Valid 5MS DataStreamSuffix and DataStreamType Code 'Combinations'

- Tables provide the valid 'combinations' between DataStreamType codes and the first character of the 'ElectricityDataStream/Suffix' value.
- With consideration to the physical configuration of an individual meter and/or *Metering Installation*, DataStreamSuffixes highlighted in GREEN reflect AEMO required 'combination's from the AEMO MDFF Go-Live (Feb 2021) and not prior to this date.

## Net & Register Level CNDS Records

	First character								2 <sup>nd</sup> character
	Ave	<i>DatastreamType</i>	Master	<i>DatastreamType</i>	Check	<i>DatastreamType</i>	Net	<i>Datastream Type</i>	
IMPORT kWh	A	<i>I or N for Virtual NMI's</i>	B	<i>I or N for Virtual NMI's</i>	C	N	N	<i>I or P</i>	Meter numbers or measuring elements are to be 1-9 then A-H, J-N, P-Z
EXPORT kWh	D	<i>I or N for Virtual NMI</i>	E	<i>I, P or N for Virtual NMI's</i>	F	N			
IMPORT kvarh	J	N	K	N	L	N	X	N	
EXPORT kvarh	P	N	Q	N	R	N			
KVAh	S	N	T	N	U	N			
Power Factor pF			G	N					
Q Metering Qh			H	N	Y	N			
Par Metering parh			M	N	W	N			
VOLTS (or V <sup>2</sup> h) or Amps (A <sup>2</sup> h)			V	N	Z	N			

## Accumulation CNDS Records

First Character	Second Character	<i>Datastream Type</i>
1	First Datastream	Meter numbers are to be 1-9 then A-H, J-N, P-Z.
2	Second Datastream	
3	Third Datastream	
4	First controlled load Datastream	
5	Second controlled load Datastream	
6	Third controlled load Datastream	
7	First LNSP/ENM defined Datastream	
8	Second LNSP/ENM defined Datastream	
9	Third LNSP/ENM defined Datastream	



# Scenario 8: An interval metered NMI with Master, Check and Logical Meters

	Physical Meter	CATS_Meter_Register, 'Suffix'	CATS_NMI_Data_Stream		
			'DataStreamSuffix'	'DataStreamType'	ADL
Current State – Master Meter	Ex Bx Qx Kx	Ex Bx Qx Kx	Nx	I	500
Current State – Check Meter	Fx Cx Rx Lx	Fx Cx Rx Lx	N/A	N/A	N/A
Current State – Logical Meter	Dx Ax Px Jx	Dx Ax Px Jx	N/A	N/A	N/A
Final State – Master Meter	Ex Bx Qx Kx	Ex Bx Qx Kx	Ex Bx Qx Kx	N N N N	0 0 0 0
Final State – Check Meter	Fx Cx Rx Lx	Fx Cx Rx Lx	Fx Cx Rx Lx	N N N N	0 0 0 0
Final State – Logical Meter	Dx Ax Px Jx	Dx Ax Px Jx	Dx Ax Px Jx	I I N N	15 0 0 0

Within RM29 reporting, AEMO will identify unexpected combinations across all active CNDS records for a NMI.



# Accreditation activities

Craig Shelley

# MSP accreditation updates: Observations

## Background

- 5MS/GS [MSP accreditation update plan](#) sets out the process and timing for:
  - MSPs to assess the need for an accreditation update
  - MSPs to apply for an accreditation update where necessary
  - AEMO to process accreditation update applications

## Progress to date

- Most MSPs have returned their accreditation readiness surveys, AEMO following up those who have not
- About 1/3 of pre-accreditation meetings have been completed (MTP due date is 30 June 2020)- on track.
- AEMO planning for accreditation processing is underway
- AEMO encourage MSP's to review the Qualification Procedure which provides the process to be taken regarding re-accreditation in conjunction with the MSP accreditation update plan.

# Changes to AEMO's Meter Data Validation Framework

Simon Tu

# Changes to AEMO's Meter Data Validation Framework

## Background

- In an early Joint Metering Focus Group meeting (Nov 2018), attendees discussed the potential inefficiencies caused by the delays in updating NMI standing data in MSATS for the delivery of metering data to AEMO and Participants
- Although from a Procedural perspective, MDPs are not meant to send metering data until the MSATS standing data is in place, AEMO took an action to consider how AEMO's 5MS systems may be able to alleviate this issue for Industry in a 5MS environment

# Changes to AEMO's Meter Data Validation Framework

## AEMO's considerations

- In establishing the new validation framework for B2M MTRD, AEMO reviewed the following B2M MDMT rejection rules:
  - a) Rejecting Metering Data for Data Streams not established in CATS NMI Datastream (CNDS).
  - b) Rejecting Metering Data for NMIs not established in CATS NMI Data (CND).
  - c) Rejecting Metering Data sent by a participant not associated to a NMI in CATS NMI Participant Relationships (CNPR)

## AEMO's findings

- AEMO will be able to accommodate scenario (a) and (b) and will, instead of rejecting the metering data, accept and create an informational warning in the associated Transaction Acknowledgment.
- AEMO unfortunately cannot accommodate scenario (c) and will continue to reject Metering Data sent by a participant not in the CNPR role.

# MTP activities: Clarifications and approaches

Greg Minney and Blaine Miner

# MTP activities: Clarifications and approaches

## Objectives

- To ensure Participants understand the intent of the activities contained in the MTP
- To agree required approaches where applicable
- To confirm required support from AEMO



# MP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Identify which meters need replacing or reconfiguring	S01/A1, S02/A6, S03/A11, S04/A16, S05/A22	Participant discretion	Nothing requested at this stage	
Assess and apply for data storage exemptions	S01/A2 & A5, S02/A7 & A10, S03/A12 & A15, S04/A18 & A21	Participant discretion	Process data exemption requests	
Install or reconfigure meters as required	S01/A4, S02/A9, S03/A14, S04/A20, S05/A24, S06/A25, S07/A26, S08/A27, S09/A28, S10/AA29	Participant discretion	Nothing requested at this stage	
Complete RegisterID to 'Suffix' data cleanse	S13/A36a, S14/A40a, S15/A45a, S17/A57a, S18/A63a, S19/A69a, S20/A75a	Until the requirement has been removed, we need to plan for an appropriate transition e.g. timing and preferred approach	Dependent on agreed approach	AEMO and Participants to monitor discussions at the ERCF and Standing Data Review
Create Registers in MSATS	S26/A97, S27/A101, S27a/A101c	Updates to occur via CATS CRs	Notification mgt potentially	
Complete data cleanse of Meter Installation Type codes	S39/A121	Updates to occur via CATS CRs	Notification mgt potentially	
Assess and apply for Accreditation Updates	S41/A123&A124&A125 S42/A127&A128&A129	AEMO accreditation workflow	Assessment and application support	

# MDP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Agreement to allow the delivery of 5min metering data pre-1 July 2021	S13/A32 & A34, S14/A37 & A39, S15/A42 & A44, S16/A47 & A49, S17/A53 & A55, S18/A59 & A61, S19/A65 & A67, S20/A71 & A73, S22/A84 & A85, S23/A88 & A91	AEMO/Participants to engage other Parties as required  Participants to advise AEMO of indicative 5min delivery/reception dates  AEMO to publish list of participant timings	AEMO must be a party to any agreement as per the NER	
5min metering data delivered to Participants (B2B)	S13/A33, S14/A38 S15/A43, S16/A48, S17/A54, S18/A60, S19/A66, S23/A82, S23/A90	As per Participant project plans	Nothing requested at this stage	
Register level 5min metering data delivered to AEMO (via MDFF)	S13/A35, S14/A41 S15/A46, S16/A50, S17/A56, S18/A62, S19/A68, S20/A74, S22/A86 S23/A92, S23/A94, S38/A120a	As agreed between an MDP and AEMO	Bi-lateral party	AEMO expected to require 5min metering data from Feb 2021
Create/activate register level CNDS records	S13/A36, S14/A40 S15/A45, S16/A51, S17/A57, S18/A63, S19/A69, S20/A75, S26/A83, S26/A96, S27/A100, S27a/A101b, S36/A117&A118	Updates to occur via CATS CRs  Notification mgt to be determined	Nothing requested except for potential notification mgt support	CNDS clarification document to be published mid-April

# MDP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Provide forward plan to AEMO and industry	S17/A52, S18/A58, S19/A64, S20/A70	<p>Each MDP Rollout plan is to include: transition window, volumes, ramp rates and overall approach e.g. jurisdictional, distribution area, Retailer.</p> <p>All 'Required meters' under the 5MS Rule must be included</p> <p>Application of a common template and the provision of periodic updates</p>	AEMO to consolidate rollout plans and provide information and advice to the TFG	TFG to determine preferred template
NCUL profiles and algorithms	S23/A89	MDPs to provide NCUL profiles and algorithms for AEMO approval	Approval related support	
Delivery of tier 1 basic meter metering data (Actuals, Subs and Forward Estimates) to AEMO	S24/A93	Timing and approach to be determined by the MDPs	Nothing requested at this time	Tier 1 basic meter reads can be provided to AEMO today and must be provided from 1 April 2021
Update (remove/add) new DataStreamType codes as required	S37/A119, S38/A120	Updates to occur via CATS CRs Notification mgt considerations to be determined	Nothing requested except for potential notification mgt support	CNDS clarification document to be published mid-April
Finalise Accreditation Updates as required	S43/A131-133, S44/A135-137	AEMO accreditation workflow	Assessment and application support	

# MC 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Provide visibility of approach / timeframe for required meter replacement or reconfiguration	S01/A3, S02/A8, S03/A13, S04/A19, S05/A23	Populate template provided by AEMO  Provide periodic updates	Consolidation of information and provision of information to RWG/TFG	Template provided by AEMO Periodic updates required to manage progress and risks/issues ( <b>new activities for MTP</b> )
For any registered 'Special Site' (as defined in the 'Special Sites and Technology Related conditions within the National Electricity Market Version 1.2), update and distribute algorithms adjusted for introduction of 5 minute interval length to AEMO, FRMP and LNSP for approval.	S12/A31	TBD	AEMO part of the approval process	

# LNSP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Create NMIs: Cross-boundary NCULs SASCAL	S26/A95, S27/A98a & A99  S27a/A101a	NCULs- Wait for new NMI Classification Code to be available and then create required NMIs (eliminates erroneous transfer risks)	Nothing requested at this stage	
Update NMI Class Codes: NCONUML DWHOLESALE NREG XBOUNDARY GENERATR	S29/A105, S30/A107, S31/A109, S32/A111, S33/A113	Updates to occur via CATS CRs  Notifications are <u>not</u> expected to be suppressed	Monitoring of NCC application where possible	Updates are the responsibility of the LNSP and are to be performed using CATS CRs
Determine and engage Metering Coordinator (after Global Settlement market commencement on 6 February 2022)	S04/A17		Nothing requested at this stage	

# TNSP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Update NMI Class Codes: BULK WHOLESALE	S28/A103, S34/A115	Updates to occur via CATS CRs  Notifications are <u>not</u> expected to be supressed	Monitoring of NCC application where possible	Updates are the responsibility of the TNSP and are to be performed using CATS CRs

# FRMP 'Responsible' MTP Activities

Activity	SC & Activity References	Proposed Approach	Support from AEMO	Comments
Ability to receive and process new NMI Classification Codes: BULK NCONUML DWHOLESALE NREG XBOUNDRY GENERATR WHOLESALE	S28/A102, S29/A104, S30/A106, S31/A108, S32/A110, S33/A112, S34/A114	Updates to occur via CATS CRs  Notifications are not expected to be suppressed	Nothing requested at this stage	By 30 April 2021

# FRMP/LR updates (GLOPOOL)

- It is AEMO's intention to perform bulk updates for:
  - LR Participant ID on all Distribution connection points to 'GLOPOOL' (excluding Embedded Networks)
  - FRMP Participant ID on all Bulk Supply Points (TNIs) and Cross Boundary connection points to 'GLOPOOL'
- Updates to be effective 6 Feb 2022 and run as part of GS go-live process
- No notifications to be sent out from MSATS. AEMO proposes to:
  - Provide 'Update logic' to Participants
  - Fast-track in-flight CRs prior to bulk updates being applied (similar process to POC)
  - Provide Reconciliation files to FRMPs
    - AEMO's initial view on providing files to other Participant types
- MSATS validations will be in place to ensure accurate LR and FRMP maintenance from GS Go-live



# Readiness reporting relating to MTP

Austin Tan

# Reflecting progress in your responses

- The Metering Transition Plan is monitored through Readiness reporting. Participants are encouraged to provide candid status reporting and raise any issues through the readiness surveys
- Participants will provide status reporting on activities relevant to their participant type **at a sub-category level**. When completing the readiness survey, participants will be asked to choose from the following statuses for each relevant sub-category:

Response	Description	Comments
Complete	<ul style="list-style-type: none"> <li>• All activities associated to the participant type within the sub-category are completed</li> </ul>	<ul style="list-style-type: none"> <li>• AEMO will not be validating the self-reported statuses of participants. "Complete" responses will be taken at face value.</li> </ul>
On track (started)	<ul style="list-style-type: none"> <li>• All relevant activities are on track for completion by the transition end date, and;</li> <li>• Implementation on one or more activities has commenced</li> </ul>	-
On track (not started)	<ul style="list-style-type: none"> <li>• All relevant activities are on track for completion by the transition end date, and;</li> <li>• Implementation has not yet commenced on any activity</li> </ul>	-
At risk	<ul style="list-style-type: none"> <li>• One or more activities within the sub-category are at risk of missing the transition end date</li> </ul>	<ul style="list-style-type: none"> <li>• Survey comments to include mitigations and recovery plan</li> </ul>
Late	<ul style="list-style-type: none"> <li>• One or more activities within the sub-category are not expected to be completed by the transition end date; or</li> <li>• One or more activities within the sub-category is not completed by the transition end date</li> </ul>	<ul style="list-style-type: none"> <li>• Survey comments to include recovery plan/activities</li> </ul>
n/a	<ul style="list-style-type: none"> <li>• All activities in the sub-category are not applicable to your organisation</li> </ul>	<ul style="list-style-type: none"> <li>• Please provide reasoning as to why the activities are not relevant to your organisation</li> </ul>

# Reflecting progress in your responses - Example

## Example format of MTP monitoring criteria – for Metering Providers (not exhaustive)

- For the following sub-categories defined in the MTP, is your organisation on track to complete the associated activities (MP related only) by the defined transition end date?

Category	Sub-Cat ID	Activity ID	Sub-Cat Description	Status
Meter Installation and Reconfiguration	S01	A1, A2, A4, A5	BULK/Wholesale Meters	
	S02	A6, A7, A9, A10	Type 1-3 meters	
	S03	A11, A12, A14, A15	Subset of type 4 meters - TNI, Market Generator or SGA	
	S04	A16, A17, A19, A20	Cross Boundary meters (KNOWN)	
	S05	A21, A23	Cross Boundary meters (UNKNOWN)	

**Response options**

- Complete
- On track (started)
- On track (not started)
- At risk
- Late
- n/a

Sub Category	Sub-Cat ID	Activity ID	Activity ID	Responsibility
BULK/Wholesale Meters	S01	A1	Identify which meters need replacing or reconfiguring	MP
		A2	Initial assessment of whether data storage exemptions may be required	MP
		A3	Provide visibility of approach / timeframe for required meter replacement or reconfiguration	MC
		A4	Install or reconfigure meters as required	MP
		A5	Apply for data storage exemptions as required	MP

# Metering transition plan past and upcoming activities: Meter installation and reconfiguration

Sub-Category	Activities	Responsible	Transition end date
S01 Bulk/Wholesale meters S02 Type 1-3 S03 Subset of type 4 S04 Cross boundary (known)	<ul style="list-style-type: none"> <li>Identify which meters need replacing or reconfiguring...</li> <li>Initial assessment of whether data storage exemptions may be required</li> </ul>	MP	31 Mar 2020
	<ul style="list-style-type: none"> <li>Provide visibility of approach / timeframe for required meter replacement or reconfiguration [to AEMO]</li> </ul>	MC	31 Mar 2020
S05 Cross boundary (unknown)	<ul style="list-style-type: none"> <li>Identify which meters need to be installed, replaced or reconfigured</li> </ul>	MP	1 Jul 2020
	<ul style="list-style-type: none"> <li>Provide visibility of approach / timeframe for required meter replacement or reconfiguration [to AEMO]</li> </ul>	MC	31 Dec 2020

# Metering transition plan upcoming activities: Metering data delivery

Sub-Category	Activities	Responsible	Transition end date
S17 New and replacement type 4 S18 New and replacement type 4A S19 New and replacement VIC AMI meters S20 New and replacement SAMPLE meters S21 Pre-1 Dec 2018/19 Type 4, 4A, VICAMI and SAMPLE meters	Provide forward plan to AEMO and industry	MDP	1 Jul 2020

# Metering transition plan past and upcoming activities: MSP accreditation updates

Sub-Category	Activities	Responsible	Transition end date
MP/MDP accreditation (for 1 July 2021)	<ul style="list-style-type: none"> <li>Assess level of change required for people, process and systems to facilitate 5MS/GS implementation</li> </ul>	MP/MDP	28 Feb 2020
	<ul style="list-style-type: none"> <li>Confirm scope/scale of change with AEMO</li> </ul>		30 Jun 2020
	<ul style="list-style-type: none"> <li>If needed, apply for accreditation update</li> </ul>		In accordance with Roadmap agreed with AEMO
MP/MDP accreditation (for 1 Dec 2022)	<ul style="list-style-type: none"> <li>Assess level of change required for people, process and systems to facilitate 5MS/GS implementation</li> </ul>	MP/MDP	31 Mar 2020
	<ul style="list-style-type: none"> <li>Confirm scope/scale of change with AEMO</li> </ul>		30 Sep 2020
	<ul style="list-style-type: none"> <li>If needed, apply for accreditation update</li> </ul>		In accordance with Roadmap agreed with AEMO

# Readiness reporting - timelines

Readiness reporting	Survey released	Survey responses due	Distribute results	Discuss at RWG	Discuss at PCF	Discuss at EF
Round #1	05-Feb-20	14-Feb-20	2-Mar-20	11-Mar-20	05-Mar-20	Proposed 12-Mar-20
Round #2	14-Apr-20	23-Apr-20	07-May-20	14-May-20	02-Jun-20	Proposed 11-Jun-20
Round #3	07-Jul-20	16-Jul-20	30-Jul-20	13-Aug-20	03-Sep-20	Proposed 07-Sep-20
Round #4	01-Sep-20	10-Sep-20	24-Sep-20	08-Oct-20	05-Nov-20	19-Nov-20
Round #5	03-Nov-20	12-Nov-20	26-Nov-20	09-Dec-20	tbc	tbc

<https://aemo.com.au/en/initiatives/major-programs/nem-five-minute-settlement-program-and-global-settlement/readiness-workstream/readiness-reporting>

	FEB		MAR		APR		MAY		JUN	JUL		AUG	SEP		OCT	NOV		DEC	
Round #1	Wed 5 Feb	Fri 14 Feb	Fri 28 Feb	Thu 5 Mar	Wed 11 Mar														
Round #2						Tue 14 Apr	Thu 23 Apr	Thu 7 May	Thu 14 May	Tue 2 Jun									
Round #3										Tue 7 Jun	Thu 16 Jun	Thu 30 Jul	Thu 13 Aug	Thu 3 Sep					
Round #4													Tue 1 Sep	Thu 10 Sep	Thu 24 Sep	Thu 8 Oct	Thu 5 Nov		
Round #5																Tue 3 Nov	Thu 12 Nov	Thu 26 Nov	Thu 9 Dec

\*\*\* TFG reps to support RWG reps in ensuring accurate Survey Responses

Survey released
Responses due
Results distributed
Discuss at RWG
Discuss at PCF

# Next steps and general questions

Greg Minney



# Reflection on session objectives

- Increase clarity and understanding of activities in the MTP
- Confirm those areas where:
  - AEMO support may be required by participants
  - Implementation approaches to activities need elaborating
- Share plans and approaches across impacted participants
- Support ongoing participant work programs
- Confirm next steps for TFG

# Next steps

- Continued implementation of MTP
- Meeting outcomes and actions to be circulated to TFG and RWG
- Any MTP changes to be presented to the RWG for their consideration
- Other?

# 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	<ul style="list-style-type: none"> <li>Must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data.</li> </ul>	By 1 July 2021
Subset of Type 4*	<ul style="list-style-type: none"> <li>Must be capable of recording and providing, and configured to record and provide, five-minute trading interval energy data.</li> </ul>	By 1 July 2021
Types 4, 4A and 5	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	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	<ul style="list-style-type: none"><li>MDFF NEM12 files to be the required file format<ul style="list-style-type: none"><li>For all interval metering data being delivered to AEMO</li></ul></li><li>MDFF NEM13 files to be supported by AEMO</li><li>MDMF files for basic meter reads will continue to be supported and accepted</li></ul>	From 1 July 2021
Granularity	<ul style="list-style-type: none"><li>NEM12 interval metering data to be:<ul style="list-style-type: none"><li>Delivered at the register level (E, B, Q and K)<ul style="list-style-type: none"><li>NEM12 200 records must be accurate</li></ul></li><li>As per the meter's trading interval configuration i.e. 5, 15 or 30-minute intervals</li></ul></li></ul>	From 1 July 2021
Energy	<ul style="list-style-type: none"><li>Metering data which must be sent to AEMO:<ul style="list-style-type: none"><li>Import and Export Active energy (kWh) (E and B)</li><li>Import and Export Reactive energy (kVarh) (Q and K), where applicable</li></ul></li><li>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.</li></ul>	From 1 July 2021

# 5MS/GS: MSATS datastream standing data

Metering Type	Requirement	Date
Types 1, 2, 3 and 7	<ul style="list-style-type: none"> <li>Net datastreams (N1) must be converted to Register level datastreams (E1, B1, etc.)</li> </ul>	By 1 July 2021
Subset of Type 4*	<ul style="list-style-type: none"> <li>Net datastreams (N1) must be converted to Register level datastreams (E1, B1, etc.)</li> </ul>	By 1 July 2021
Types 4, 4A and 5	<ul style="list-style-type: none"> <li>All new records relating to interval meters must be created at the register level e.g. E and B.</li> <li>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.</li> <li>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. <ul style="list-style-type: none"> <li>Datastreams must be established in a manner that ensures they are not included in market settlements.</li> </ul> </li> </ul>	From 1 July 2021
Basic Meters	<ul style="list-style-type: none"> <li>All 1st tier datastreams must be activated and meter reads delivered to AEMO, for UFE purposes</li> </ul>	By 1 July 2021



# 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	<i>Connection point where a transmission network connects to a distribution network - also termed 'Bulk Supply Point'</i>
DWHOLSAL	<i>Distribution network connection point where energy is directly purchased from the spot market by a Market Customer</i>
NCONUML	<i>Non-contestable unmetered load</i>
NREG	<i>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.</i>
WHOLESALE	<i>Transmission network connection point where energy is directly purchased from the spot market by a Market Customer</i>
XBOUNDRY	<i>Connection point where a distribution network connects to another to distribution network</i>

