5MS Metering Focus Group

10:00am – 4:00pm
Thursday 18 July 2019

AEMO Office:
AEMO Sydney Office - Sydney
Face-to-face only

Agenda

NO	TIME	AGENDA ITEM	RESPONSIBLE
Preliminary Matters			
1	10:00am - 10:15am	Welcome, Introduction and General Housekeeping	Blaine Miner (AEMO)
Matters for Noting and Discussion			
2	10:15am - 10:45am	Metering Consultation Update	Blaine Miner (AEMO)
3	10:45am - 11:15am	June MFG Actions	Blaine Miner (AEMO)
4	11:15am - 1:00pm	Non-Contestable Unmetered Loads - NMI Creation - Inventory Management - Profiling	David Ripper (AEMO)
	1:00pm - 1:30pm	Lunch	
5	1:30pm - 2:30pm	MSATS Standing Data Scenarios - NMI Classification Codes - LR and ENLR	Blaine Miner (AEMO)
6	2:30pm - 3:00pm	Proposed Metering Data Quantity and Quality SLAs	David Ripper (AEMO)
7	3:00pm – 3:45pm	Readiness Workstream - 5MS/GS metering readiness planning - Interplay between procedures and transition & cutover activities	Greg Minney & Emily Brodie (AEMO)
8	3:45pm – 4:00pm	General Business and Next Steps	Blaine Miner (AEMO)

Metering Consultation Update

Blaine Miner

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Metering package #2 – Submissions Overview

- 20 Submissions were received by the closing date, Monday 24 June 2019
  - The submissions were published on AEMO's website on Friday 28 June 2019
- Almost 1,000 pieces of feedback received
- Material Items
  - Treatment and profiling of non-contestable unmetered loads
  - Metering data quality and quantity requirements
  - Inclusion of MSATS Standing data scenario content into the relevant procedures e.g. NMI Procedure
  - Approach to the removal/replacement of the LR and the introduction of the ENLR

Metering package #2 – Submissions Overview

Material Item	High-level Response Summary

NMI to device relationship for non-contestable unmetered loads	• Varying views:
	  • 1 to 1
	  • 1 to Many
	  • Allowing for both 1 to 1 and 1 to Many

Profiling of non-contestable unmetered loads	• Varying views re:
	  • Simple vs complex
	  • Who performs the profiling itself i.e. MDPs or AEMO

Metering data quality and quantity requirements	• Participants wanted to make sure AEMO struck the right balance in improving requirements while not introducing unintended consequences
MSATS Standing data scenarios	• Procedures do not fully reflect the scenarios discussed in the June MFG
Removal/replacement of the LR and the introduction of the ENLR	• Changes to the LR and the addition of the ENLR has not been implemented accurately in all instances

Advice Being Sought

Deliverable	Indicative date
Issues Paper published	20 May 2019
Submissions due on Issues Paper	24 June 2019
Draft Report published	5 August 2019
Submissions due on Draft Report	19 August 2019
Final Report published	30 September 2019

1. Other material items (additional to the 5 mentioned on the previous slide) which needs to be considered for the Draft report?
2. Fully 'decoupling' the ICF and MP2 consultations i.e. the MP2 procedure versions would not include ICF changes
3. Allowing additional time for participants to respond to the Draft Determination
4. Various timing options regarding the publication of MP3 guidelines and documents e.g. publish in Aug or after MP2 is finalised

Expected MP2 Draft Determination Versions

Procedure	Affected Parties	Current Version	Effective Date	Dec-20	Jul-21	Feb-22
Metrology Part A	All Participants	6.04	1-Dec-17			7.1
Metrology Part B	All Participants	6.0	1-Dec-17			7.1
MDFF Specification	MDPs	1.06	1-Dec-17	2.1		
Glossary & Framework	All Participants	2.1	1-Dec-17			3.1
MDM Procedures	All except NSPs	3.3	1-Dec-17	4.0		
MDM Format & Upload Process	MDPs	1.1	1-Dec-17	2.0		
NMI Procedure	All Participants	6.0	1-Dec-17			7.0
CATS	All Participants	4.7	20-May-19			5.0
WIGS	All Participants	4.7	20-May-19			5.0
RoLR Processes Part A	RoLRs	1.0	1-Mar-16			2.0
SLP MDP	MDPs	1.7	1-Dec-17	2.0		
Exemption - Data Storage	MCs and MPs	N/A	N/A		1.0	

June MFG Actions

Blaine Miner

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June MFG Actions

Agenda Item	Action	Responsibility	Response
MSATS Standing Data Scenarios	AEMO and the MFG to consider preferred SGA identification and classification options	AEMO	AEMO is seeking confirmation that NSPs have no way of classifying SGA NMIs accurately prior to considering an alternative approach.
MSATS Standing Data Scenarios	AEMO to consider and apply alternative labelling of for Hybrid scenarios	AEMO	AEMO has not identified a preferred alternative visual, however, we have changed the description from "Battery" to "Hybrid (Gen & Load)" for the MFG's consideration.
MSATS Standing Data Scenarios	AEMO to circulate the underlying diagram used to support the MSATS Standing Data scenarios agenda item	AEMO	The current version of the underlying diagram has been attached to this email.
MSATS Standing Data Scenarios	AEMO to consider how and where the information captured in the MSATS Standing Data scenarios diagram could be included in AEMO documentation e.g. diagram or table version included in the NMI Procedure document	AEMO	As per the discussion in the MFG, AEMO is planning on including this information predominantly in the NMI Procedure. These changes will be included in the Draft Determination procedures.
Metering Consultation Update	MFG to provide detailed advice on preferred options for communicating how the Metering Package procedure versions fit together	MFG	Providing mark changed versions based on the order of the effective start date of the procedures (and not the date of the consultation) is also important for industry to determine the changes for each effective start date. Given the volume of changes, the number of procedures that are changing and the multiple versions of the same procedure due to different effective start date, this current approach is ineffective. Please extend the "How Does It All Fit Together update….?" table on slide 7 of the 14-Jun-19 AEMO MFG Meeting Notes to include Metering Package 3. I am happy with the approach AEMO has provided – I have used the marked up version this time and will do the same for the next round, I think the harder part is actually referencing other documents when going through the procedures but this has been the same with previous versions anyway.

June MFG Actions

Agenda Item	Action	Responsibility	Response
Metering Consultation Update	MFG to provide feedback regarding the likelihood, benefits and trade-offs of requesting potential submission extensions	MFG	Important to ensure the consultation period allocated is proportionate to the nature/complexity of those changes. Expected that the draft determination will contain more changes than this initial consultation, therefore we request that the due date for feedback on the draft determination be extended.
MSATS Standing Data Scenarios	MFG to consider preferred options regarding the recovery of Bulk connection point metering fees from 6 Feb 2022	MFG	This cost would be passed onto the network/transmission business. Confirmation from the AER should be obtained Option 1: TUOS recovery and extend to Vic to remove payment by local Retailers. Option 2: AEMO adds these costs to the market fees and pay metering charges to transmission entities.
MSATS Standing Data Scenarios	AEMO and the MFG to consider preferred SGA identification and classification options	MFG	NSPs are not aware of a SGA through our connection application process because from our experience it is not a FRMP that completes and submits the connection application, it is usually the customer, the developer or a party who is organising the connection. I believe that the SGA classification code provided in the scenarios if fit for purpose.
MSATS Standing Data Scenarios	MFG to consider alternative options in handling “mixed import/export” scenarios	MFG	Clarification of what this action was is needed.
MSATS Standing Data Scenarios	MFG to provide feedback regarding the physical and market based requirements associated with cross-boundary scenarios	MFG	Option 1: Map all current cross border usage to a TNI in MSATs as part of the 5MS go-live. Option 2: Install Meters for all cross border distribution and do not rely on the TNIs. Option 1 should be taken as Option 2 is cost prohibitive and requires physical changes to the distribution network AEMO should not assume that energy flow is linked with which Network created the NMI.

Non-contestable Unmetered Loads

David Ripper

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Non-contestable Unmetered Loads

- The creation and assignment of NMIs in MSATS
  - One NMI to One Device Model
  - One NMI to Multiple Device Model
  - AGL's additive parent child relationship proposal
- Inventory verification and management
  - Inventory audits
  - Additions and removal of devices from the inventory
  - Alignment between MSATS, Retail billing and Network billing
- Profiling
  - Simple (e.g. flat and basic switching) vs complex
  - AEMO vs MDP responsibilities
- 'Non-contestable enforcement'
  - E.g. Potential MSATS validations re transfers initiated between Retailers
- Transition and cutover considerations
- Other Considerations

MSATS Standing Data Scenarios

Blaine Miner

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MSATS Standing Data Scenarios Overview

- MSATS Standing data scenarios required to ensure the correct allocation of energy from 1 July 2021
  - UFE Publication Effective Date

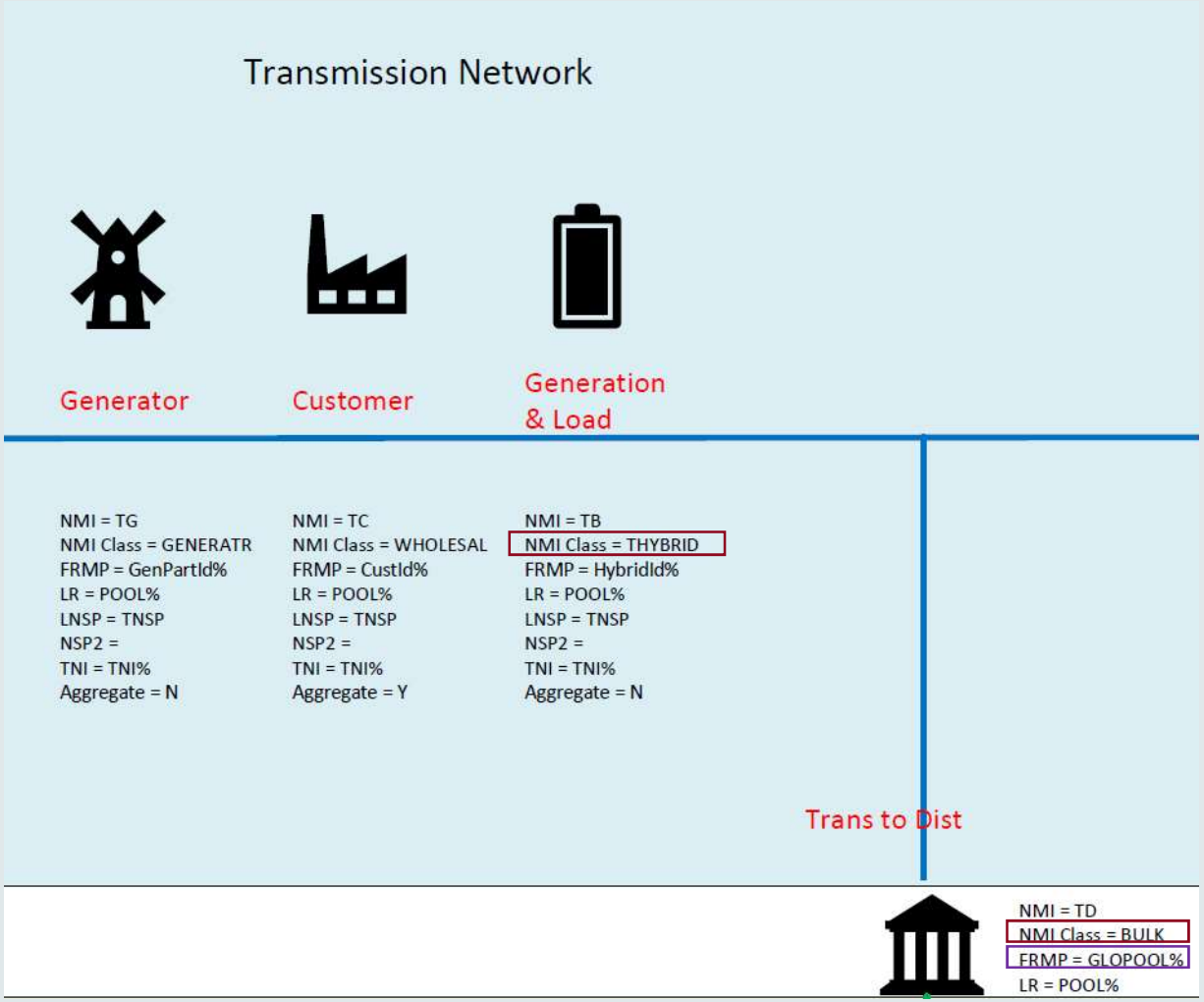
- Current thinking
  - A number of new NMI Classification Codes will be required
  - 'SGA' NMI Classification codes to include Small and Large reference i.e. 'SGAS' and 'SGAL'?
  - NMI Classification Codes expected to be updated via standard CATS CR process
  - LR and FRMP fields (GLOPOOL) to be updated by AEMO in consultation with relevant participants

- Draft Procedure considerations:
  - NMI Classification Codes
    - Will be included in the Draft NMI Procedure with an effective date of 1 July 2021
    - Will be included in the Draft CATS and WIGS with an effective date of 6 Feb 2022
  - Changes to the treatment and population of the LR and FRMP field
    - Will be included in the Draft CATS and WIGs Procedures with an effective date of 6 Feb 2022

- Other Considerations
  - Readiness - Transitional activities supporting these changes will be included in the relevant Readiness plan(s)

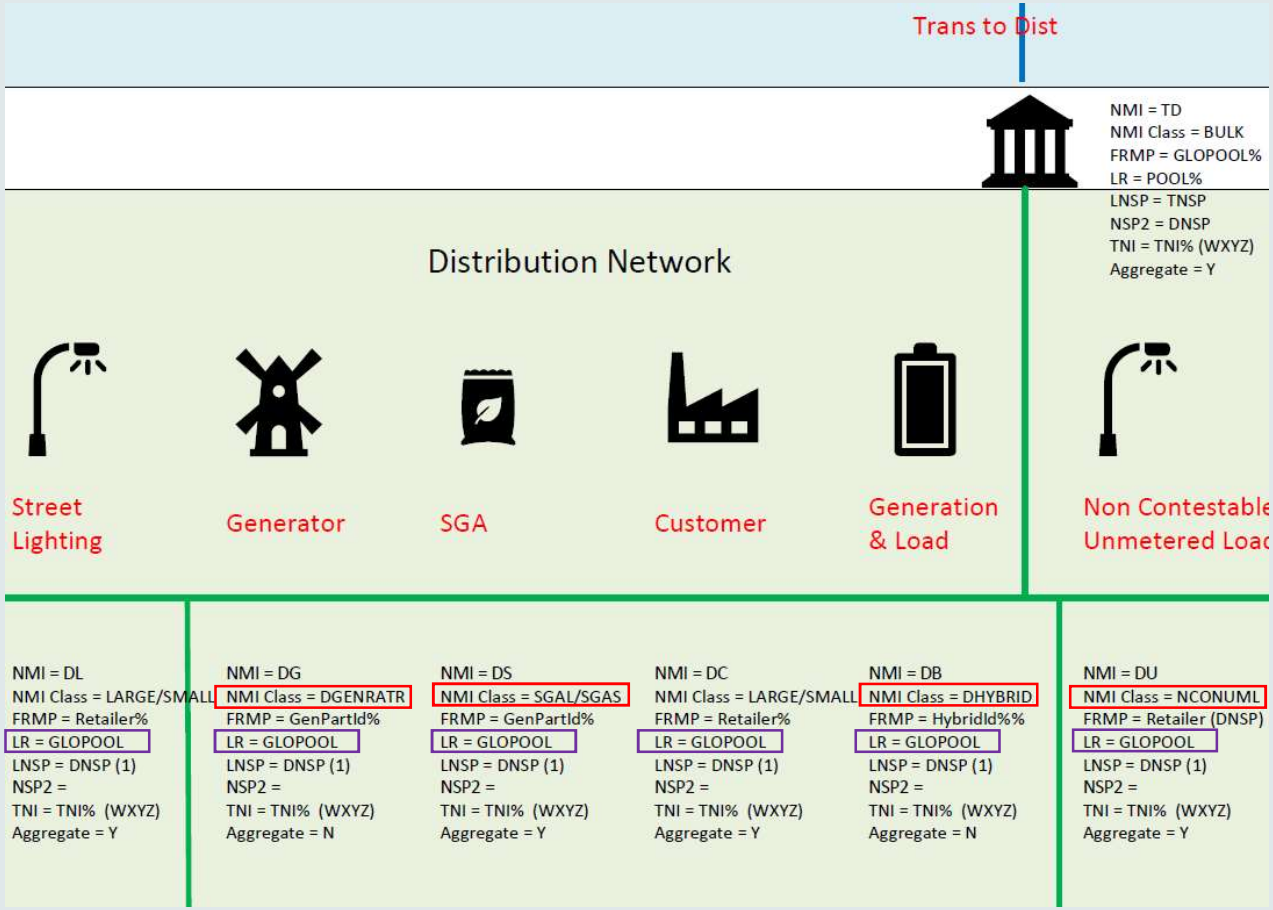
Transmission Connected Scenarios

- Changes for Transmission Connected NMIs
  - New NMI Classification Code for Battery Connections (THYBRID)
    - Requiring only 1 NMI for the installation, the other NMI will be made Extinct.
  - Transmission to Distribution Connections will be changed to BULK to differentiate them from WHOLESAL customer connections
- Participant Changes – Global Settlements
  - Transmission to Distribution Connections will have the FRMP changed to GLOPOOL



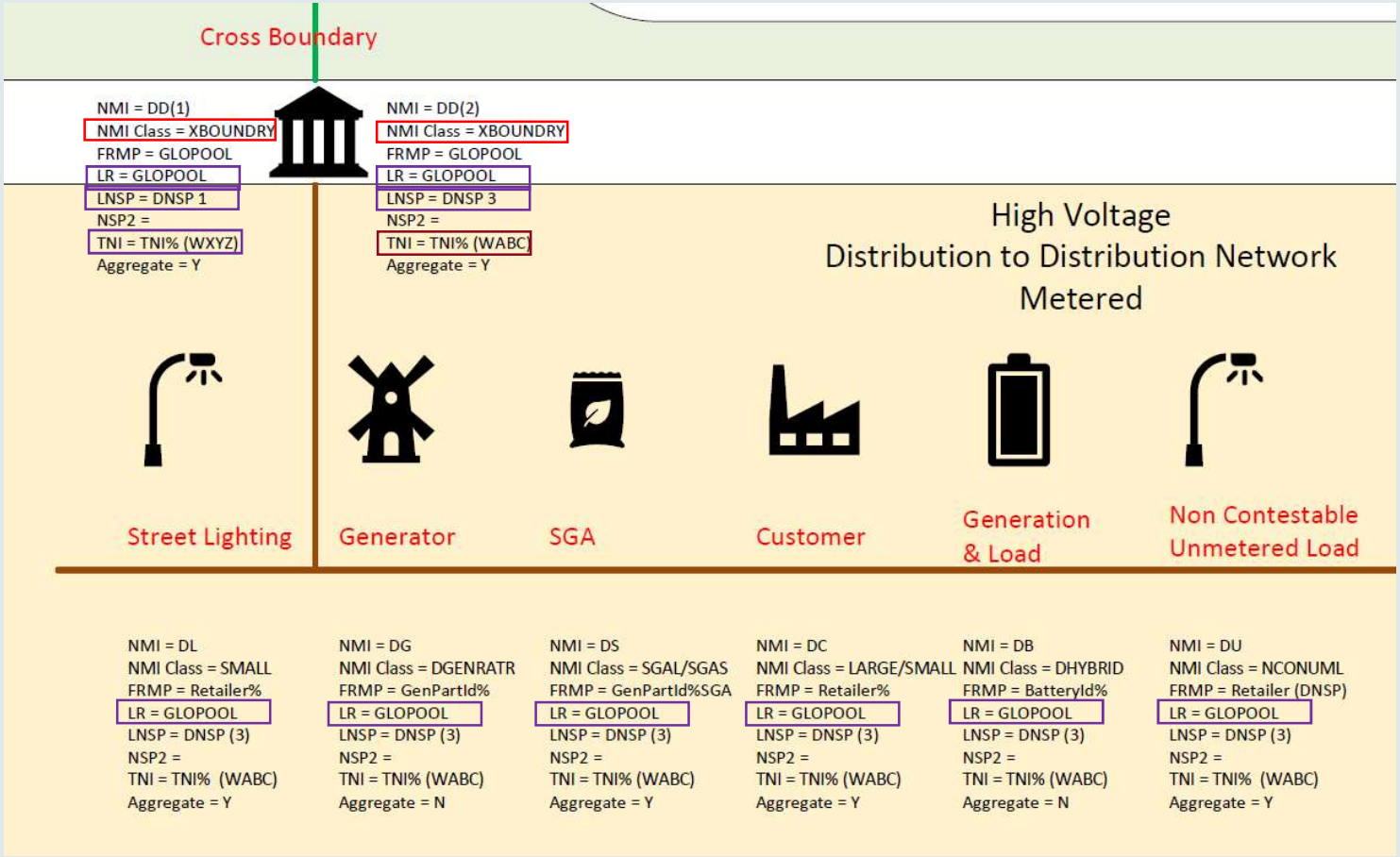
Distribution Connected Scenarios

- Changes for Distribution Connected NMIs
  - New NMI Classification Code for Battery Connections (DHYBRID)
    - Requiring only 1 NMI for the installation, the other NMI will be made Extinct.
  - New NMI Classification Code for Generator Connections (DGENRATR)
  - 2 New NMI Classification Code for Small Generator Aggregators?
    - SGAS – Small Customer?
    - SGAL – Large Customer?
  - New NMI Classification Code for Non-Contestable Unmetered Loads (NCONUML)
- Participant Changes – Global Settlements
  - Local Retailers will be changed to GLOPOOL for all distribution connected NMIs Except embedded network children



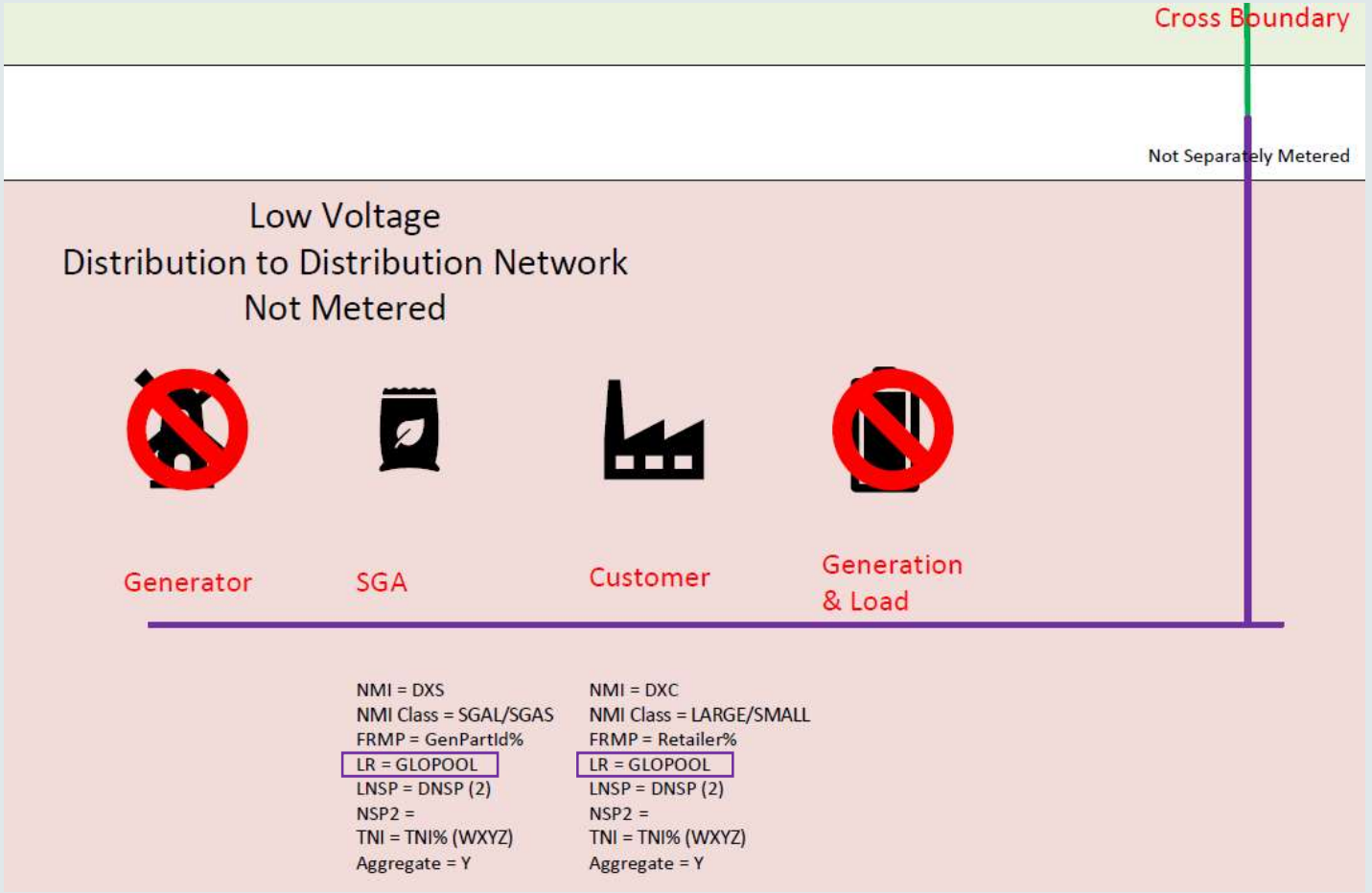
High Voltage Distribution to Distribution Connections Scenarios

- Changes for Distribution Connected NMIs
  - Distribution to Distribution High Voltage connections will need to be metered
  - A separate NMI will be set up for each Distribution network
  - New NMI Classification Code for Cross Boundary situations (XBOUNDRY)
  - A different TNI code will be assigned to end use NMI in the receipt Distribution network (Network not connected directly to TNI)
- Participant Changes – Global Settlements
  - The LR and FRMP will be changed to GLOPOOL for all Cross Boundary NMIs
  - Local Retailers will be changed to GLOPOOL for all distribution connected NMIs except embedded network children



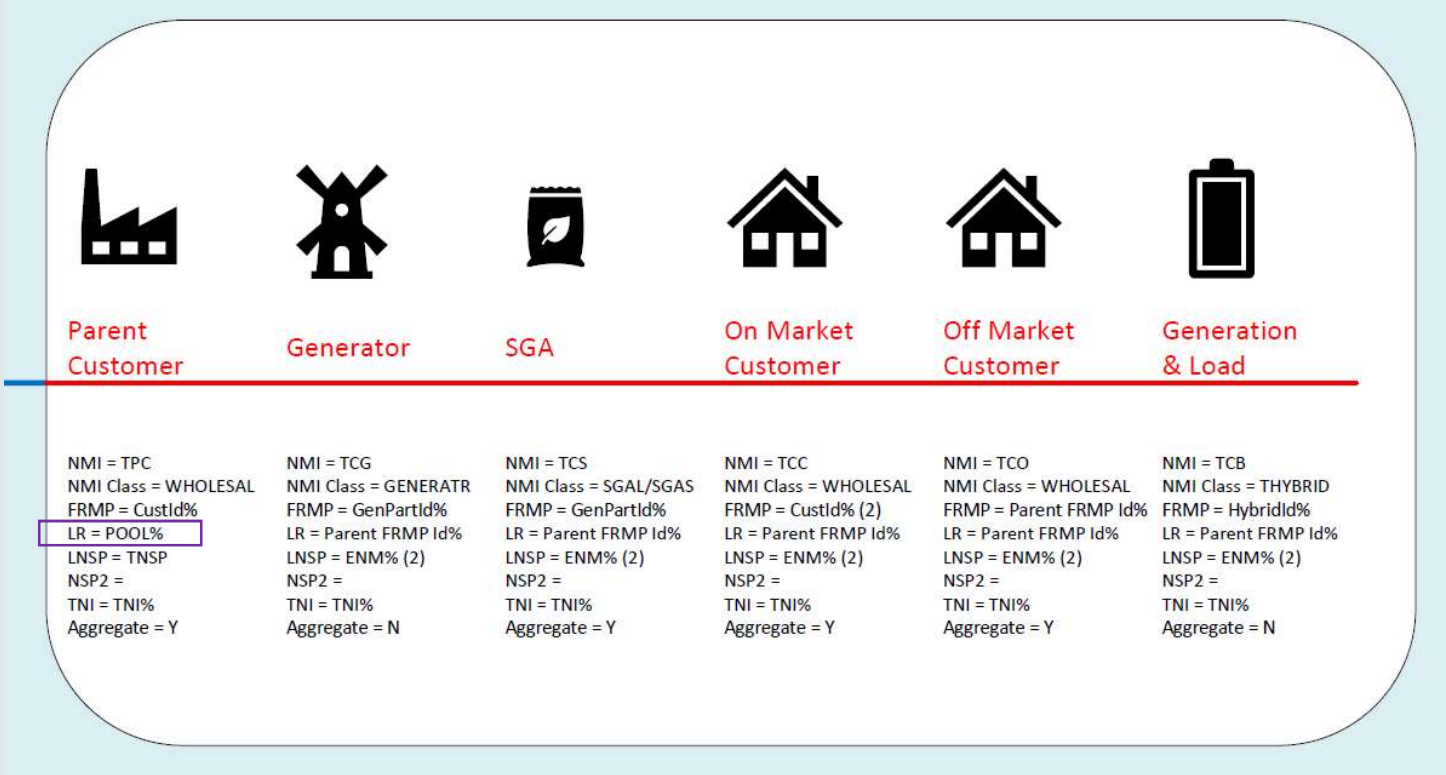
Low Voltage Distribution to Distribution Connections Scenarios

- Changes for Distribution Connected NMIs
  - Distribution to Distribution Low Voltage connections may be unmetered
  - TNI codes for each of the end use NMIs MUST have the TNI code of connection to the Transmission Network
  - Generator and Battery connections are not allowable without boundary metering
- Participant Changes – Global Settlements
  - Local Retailers will be changed to GLOPOOL for all distribution connected NMIs Except embedded network children



Embedded Network Connections Scenarios

- Changes for Embedded Network Connected NMIs
  - Embedded Network Child NMI Classification Codes will reflect those detailed in the Transmission and Distribution slides
- Participant Changes – Global Settlements
  - Local Retailers for All Embedded Network Child NMIs will remain unchanged
  - Local Retailers for Transmission Connected Embedded Network Parent NMIs will remain unchanged
  - Local Retailers for Distribution Connected Embedded Network Parent NMIs will be changed to GLOPOOL



MSATS Standing Data Scenarios

- In summary, the proposed new NMI Classification Codes are:

  - THYBRID – Transmission Connected Batteries
  - DHYBRID – Distribution Connected Batteries
  - SGAS – Small Generator Aggregator Small Customer?
  - SGAL – Small Generator Aggregator Large Customer?
  - NCONUML – Non-Contestable Unmetered Load
  - BULK – Bulk supply points from Transmission to Distribution connection points
  - XBOUNDRY – Cross boundary connection points for High Voltage connection to another Distribution Network
  - DGENRATR – Distribution connected Generator

Proposed Metering Data Quantity and Quality SLAs

David Ripper

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Proposed Metering Data Quantity and Quality SLAs

- Current Arrangements - as per the 'Service Level Procedure: Meter Data Provider Services'

Aspect	Preliminary	Final	Revision 1 (R1) or 4 month	Revision 2 (R2) or 6 month
Quantity of Settlements Ready Data	98%	98%	98%	98%
Quantity of Settlements Ready Data with 'A' or 'F' quality flag	-	-	98%	98%

- AEMO does not believe that the current arrangements are adequate to achieve the required level of accuracy in the NEM settlement process in a 5MS/GS environment
  - They don't delineate between remotely read meters and manually read meters
  - They don't reflect the expected level of improvement in both the quantity and quality of settlement ready data delivered between the settlement cycles e.g. Final vs Revision 1 (R1) vs Revision 2 (R2).

Proposed Metering Data Quantity and Quality SLAs – First Stage

- Proposed Arrangements

Metering Data Type	Aspect	Preliminary	Final	Revision 1 (R1)	Revision 2 (R2)
Remotely Read Metering Data	Quantity of Settlements Ready Data	98%	100%	100%	100%
	Quality of Settlements Ready Data with 'A' or 'F' quality flag	95%	98%	100%	100%
Manually Read Metering Data	Quantity of Settlements Ready Data	99%	99%	100%	100%
	Quality of Settlements Ready Data with 'A' or 'F' quality flag	-	-	95%	100%

Proposed Metering Data Quantity and Quality SLAs – Draft Stage

Metering Data Type	Aspect	Preliminary	Final	Revision 1	Revision 2
Remotely Read Interval Data	Quantity of Settlements Ready Data	98%	99%	99.5%	99.9%
	Quality of Settlements Ready Data	95%	98%	99.5%	99.9%
Manually Read Interval Data	Quantity of Settlements Ready Data	98%	99%	99.5%	99.9%
	Quality of Settlements Ready Data			98%	99.9%

Readiness Workstream

Greg Minney and Emily Brodie

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5MS/GS Market Readiness Framework

AEMO and industry engagement

5MS/GS implementation and readiness activities

Readiness reporting and management

5MS/GS market readiness objective

- The objective of the market readiness workstream *is to facilitate uninterrupted market operations for AEMO and NEM participants across the "go-live" dates for both 5MS and GS.*
- All Participants and AEMO are responsible for their own organisation's readiness.

5MS/GS market readiness workstream scope

Readiness Reporting and Management	• Establishment of objective readiness criteria, with regular reporting by impacted participants • Analysis and assessment of reported results • Proactive responses to identified issues • Readiness issue and risk assessments, including recommended contingency options • Escalation of issues as required
Industry Testing and Market Trials	• Planning, execution and management of Market / Industry test activities • Environment support and availability • Capability release and timing
Transition and Cutover	• Establishment of Market Transition Strategy which details the steps, activities and responsibilities in moving from current state to future state • Planning and monitoring of participant and AEMO transition activities (link to readiness criteria) • Systems cutover planning and execution - including industry co-ordination
Metering Accreditation Updates	• Identification of timing and scope of accreditation requirements • Accreditation Update approach • Monitor accreditation progress against agreed timeframes

Key readiness documents

5MS/GS metering readiness - strategy

- Metering readiness starts with a strategy and is then developed into a detailed plan.
- Metering transition activities for 5MS/GS will be identified as part of the overall Transition and Go-Live Strategy
- Strategy will be developed over Q3-4 2019 in consultation with the PCF and RWG.
- *The strategy will provide sufficient information to support participants' scoping and design.*
- Metering activities will include (but not limited to):
  - Transition of type 1-3 and 4* meters and 7 metering installations to 5-minute
  - Installation of cross-boundary meters
  - NMI re-classification
  - Updates to existing NMIs' LR and FRMP fields
  - Loading of NCUL
  - Tier 1 meter data delivery to AEMO

5MS/GS metering readiness - plan

- Metering Transition Plan will elaborate the specific plans for executing the metering activities identified in the strategy. It will:
  - Identify responsibilities, timeframes, approaches and dependencies for the metering transition activities
  - Set out readiness criteria which participants will report against as part of ongoing 5MS/GS NEM readiness assessments
  - Be developed in Q1 2020, in consultation with the RWG and MFG.

Interplay between procedures and transition & cutover

- Some submissions to metering package #2 consultation have raised transitional/cutover issues e.g. how NCULs will be populated in MSATS etc.
- Broadly:
  - Procedures reflect the "end state" market arrangements for 5MS/GS in accordance with the NER.
  - Transition/cutover planning details how and when metering/other activities should occur to get to the "end state".
- AEMO's approach to transitional/cutover issues raised in submissions or via other channels is to:
  - Where appropriate, document issues and scope activities to manage issue/s in the relevant readiness plan
  - Engage with industry on the transition plan (including coverage of the issues and activities)
  - Implement plan and manage progressive completion and readiness criteria

General Business and Next Steps

Blaine Miner

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General Business and Next Steps

- Workshop outcomes and actions to be circulated
- Call for nominations for Readiness MFG
- Next MFG

Thank you for your attendance and participation!

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