MSATS Standing Data Review Industry Workshop

3-4 February 2020

Day 1

Welcome, Introductions and Housekeeping

Michelle Norris

Housekeeping

1. Alarms
2. Toilets
3. Tea, coffee, refreshments
4. Who's in the room
5. Post-workshop drinks

Background and context of MSDR Project

Michelle Norris

Context of project

What's happened so far?

- 2017 - IEC requests AEMO review MSATS Standing Data as part of competition in metering.
- November 2018 - AEMO commences industry consultation with an external workshop to determine review scope and received a 'wish list' of proposed changes from a number of participants.
- Early 2019 - MSDR 'put on hold' due to other higher priority projects and processes.

What's changed?

- Additional consideration of future use and users of standing data due to strategic COAG/AEMC decisions, including:
  - Customer Switching (currently under consultation)
  - Consumer Data Right
  - Embedded Networks
  - Stand-alone Power Systems
  - Wholesale Demand Response (currently with AEMC)

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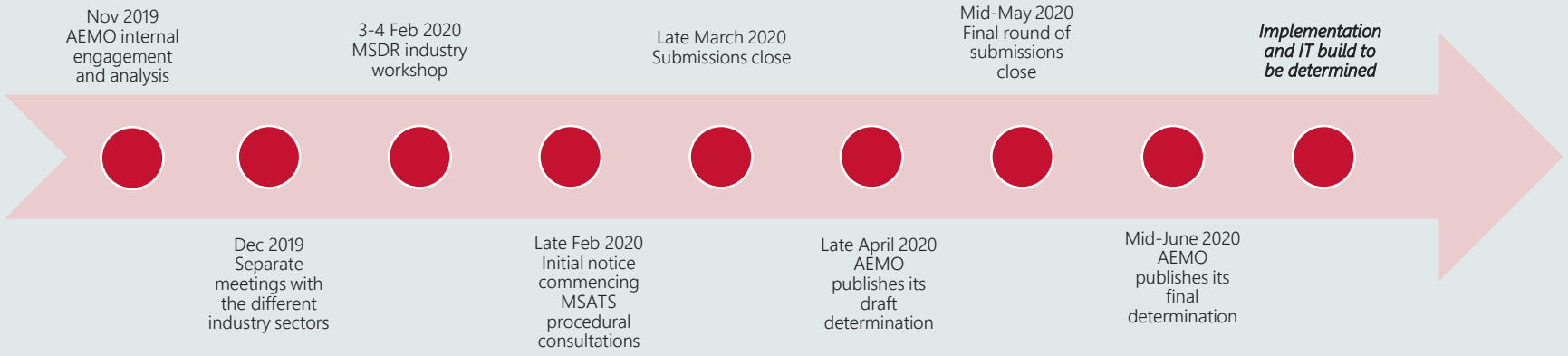
Project timeline



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Proposed review principles

Efficient	• To have standing data available to support the efficient operations of the electricity market • Does not increase barriers to market entry or competition
Flexible and future focussed	• Design flexibility so that standing data supports the current and future electricity market • All data must be complete, accurate, and useful
Improve retail outcomes for customers	• Provide data supporting the Consumer Data Right legislative reform • Provide data supporting wholesale demand response participants
Facilitate new market structures and roles	• Facilitate existing roles and reforms such as competitive metering • Enable future market roles and structures such as embedded network reforms
Transparency of metering compliance	• Provide data for transparency of compliance for market participants and maintenance for metering installations • Appropriate and timely data for maintenance of metering installations
Shared understanding of connection point information	• Provide appropriate market participants and other authorised parties with a consistent, full, and shared understanding of each connection point

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All data must be complete, accurate and useful

- AEMO is proposing that all data must be complete, accurate, and useful.
  - **Complete**:
    - No more “optional” fields—only “mandatory” or “required”.
  - **Accurate**:
    - Minimal free text, structured fields.
  - **Useful**:
    - All underutilised fields to be reviewed and/or removed.
    - New fields will only be added if the mandatory / required provision of their data would provide a net benefit to industry.

- Currently a number of data fields are poorly utilised—the data is incomplete, ‘nonsense’ and as a result, is not useful

Agenda

No.	Agenda item	Discussion lead	Time
Day 1 – 3rd February 2020			
Registration (coffee and tea provided)			9:00 – 9:30
1	Welcome, introductions and housekeeping	Michelle Norris (AEMO)	9:30 – 9:40
2	Background and context of MSATS Standing Data Review • Other major projects • Timeline of changes • Introduction to Slido	Michelle Norris (AEMO)	9:40 – 10:00
3	Overview of participant feedback	Noura Elhawary (AEMO)	10:00 – 10:30
Morning tea			10:30 – 10:50
4	NMI-related transformer connection, life support, forecasting related fields	Meghan Bibby (AEMO)	10:50 – 11:30
5	Addressing Structure	Arjun Pathy (AEMO)	11:30 – 12:00
6	Metering Installation Transformer Information	Noura Elhawary (AEMO)	12:00 – 12:30
Lunch			12:30 – 13:00

Agenda

No.	Agenda item	Discussion lead	Time
Day 1 – 3rd February 2020 continued			
7	Metering Installation Information	Jordan Daly (AEMO)	13:00 – 13:30
8	Register-level information change	Nandu Datar (AEMO)	13:30 – 14:00
9	Connection and Metering Point Details	Arjun Pathy (AEMO)	14:00 – 14:30
Afternoon tea			14:30 – 15:00
10	Metering Installation Location Information	Arjun Pathy (AEMO)	15:00 – 15:30
11	Topic areas where general agreement with AEMO's Analysis	Nandu Datar (AEMO)	15:30 – 16:00
12	Embedded Networks Reform Impact on MSATS Standing Data	Noura Elhawary (AEMO)	16:00 – 16:30
13	Day 1 wrap up	Michelle Norris (AEMO)	16:30 – 17:00
Post meeting drinks			17:00 – 17:30

Agenda

No.	Agenda item	Discussion lead	Time
Day 2 – 4th February 2020			
Arrival (coffee and tea provided)			8:45 – 9:00
1	Welcome, introductions and housekeeping	Michelle Norris (AEMO)	9:00 – 9:10
2	Summary of Day 1	Michelle Norris (AEMO)	9:10 – 10:00
Morning tea			10:00 – 10:15
3	CDR Presentation	Luke Wines (AEMO)	10:15 – 10:30
4	Schedule 7.1	Jordan Daly (AEMO)	10:30 – 10:45
5	Address remaining issues from complex topics and prioritisation (dependant on outcomes from day 1)	Meghan Bibby (AEMO)	10:45 – 12:00
Lunch			12:00 – 13:00
5	Address remaining issues from complex topics and prioritisation (dependant on outcomes from day 1)	Michelle Norris (AEMO)	13:00 – 15:30
7	Wrap up and next steps	Michelle Norris (AEMO)	15:00 – 15:30

Nametags

- Each name tag has a colour, a number, and a letter
- Please note these as these will be referenced at different times
- You only need to look at whichever one is being referenced

Overview of Participant Feedback

Noura Elhawary

Response rates

Sector	Retailer	DNSP	Metering	Other	Total
No. responses	11	8	7	4	30

Topic	Responses (no. lines)	Responses in agreement with AEMO (no. lines)
Metering	2200	1300 (59%)
NMI Information	1080	880 (81%)
Embedded Networks	138	138 (100%)
Schedule 7.1	52	32 (62%)

- Review Participant Responses Summary as in workshop pre-meeting pack

Morning Tea

Feeder Class, Life Support, and Fields Proposed in Pre-Consultation

Meghan Bibby

NMI Details

- To Amend
  - It is proposed to amend the following field

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	Feeder Class	A code to provide Participants with information to indicate the appropriate service level timeframes for performing work in relation to Service Order Requests.	This field needs more clarification of its possible values and should be made required AEMO – we have to keep it as jurisdictional requirement	60% Overall 70% Retailer	Required in which Jurisdictions? Only use generic value for many NMIs Applies to QLD only? Useful information for retailers to accommodate and understand impacts of feeders Make the field enumerated

NMI Details

- If you only operate in QLD only, please move up to the front of the room
- If you operate outside QLD, or in QLD and other jurisdictions, please introduce yourselves at your table

NMI Details

QLD-only:

Please explain how this field is used and populated in QLD (2 minutes)

Rest of the room:

*Take **a few minutes** to decide whether the provision of Feeder Class has any benefits in your jurisdictions (potentially with additional enumerations) and therefore whether Feeder Class should be mandatory, required, or optional in other jurisdictions.*

Life Support

- New Fields
  - The following fields were proposed to be added to MSATS

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
NMI Details	Life Support	Flag to indicate if the customer at the NMI has life support requirement.	AEMO's legal team is currently investigating whether this field could be included in MSATS. As such, even if participants support this field's inclusion in MSATS, the field may still be excluded from the procedure consultation.	84% disagree with adding the field	Not relevant to transmission so it should remain optional if it is not removed." Retailers can find out that a site is flagged for Life Support. AEMO legal review. has determined that MSATS should not contain any life support information. As such, the life support flag will not be considered as part of the MSATS Standing Data Review. A participant would support making any necessary changes, including the Rules, to enable this field to be added to MSATS Any changes to this field would need to be near real time to ensure LS consumer protection. Noted Make field enumerated Life Support obligations are a joint obligation between the FRMP and LNSP and should be managed via the Life Support B2B procedures.

Life Support

- AEMO's legal team has provided advice that MSATS should not contain life support information. As such, a "Life Support" field will not be considered in formal consultation for the MSATS Standing Data Review.

Fields Proposed in Pre-Consultation

- New Fields proposed as part of pre-consultation

Field Name	Field Description	AEMO's Analysis	Participant Views
MC Appointment	New field	AGL proposed this new field in their MSDR fields analysis feedback	AGL notes that the MC appointment can be made by either the FRMP in its market capacity or by the customer as allowed for in the rules. Understanding the appointment of this role is very important, and may be extended to further classes of customers over time. Therefore AGL strongly urges a field to identify when the MC is appointed by the FRMP or by the customer. Crucial for customer conversations Can enhance efficiency of processes substantially and minimise incorrect MC churns.

Fields Proposed in Pre-Consultation

- New Fields proposed as part of pre-consultation

Field Name	Field Description	AEMO's Analysis	Participant Views
Section Number	Section Number of the land	Endeavour Energy proposed this new field in their MSDR fields analysis feedback	This information along with the DP number would allow retailers to identify if they have the right NMI when they perform NMI discovery
DP Number	Deposited Plan Number of the land	Endeavour Energy proposed this new field in their MSDR fields analysis feedback. NSW-only designation.	This information along with the Section number would allow retailers to identify if they have the right NMI when they perform NMI discovery
Meter Malfunction Exemption Number	The exemption number granted by AEMO when a meter malfunction exemption is granted	Endeavour Energy proposed this new field in their MSDR fields analysis feedback	This information would allow MPBs to better communicate exemptions to meter malfunctions
Meter Malfunction Exemption Expiry Date	The end date of the malfunction exemption	Endeavour Energy proposed this new field in their MSDR fields analysis feedback	This information would allow MPBs to better communicate exemptions to meter malfunctions

Fields Proposed in Pre-Consultation

Remaining in your tables, please indicate whether you support the addition of the following fields:

- *MC appointment*
- *Section Number*
- *DP Number*
- *Meter Malfunction Exemption Number*
- *Meter Malfunction Exemption Expiry Date*

If any of the above have a majority, should they be optional, mandatory or required?

If any of the above are to be included, is there a means by which data quality can be validated?

Address Structure

Arjun Pathy

Address Structure

- To Amend
  - AEMO proposes to amend the below field

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Address Details	Delivery Point Identifier (DPID)	Delivery point identifier - the numeric descriptor for a postal delivery point which is equal to a physical address.	This field should be made required instead of optional.	72% Overall 80% Retailers	This information not held. Not used, internally managed. Pid is not always available

Address Structure

- To Remove
  - AEMO proposes to remove the below fields

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Address Details	Address Line 1-3	To provide the unstructured address (line 1) where a structured address cannot be supplied.	The unstructured address field is currently being used to store addresses that could be stored using structured address fields. Given the growing issues around poor address quality in MSATS, AEMO proposes to remove unstructured addresses from MSATS entirely.	80% of Distributors / Metering	Unstructured addresses are required. To store, incomplete addresses, farms, cattle stations, mines, new development sites, embedded networks etc.

Address Structure

- Please go to the table with your number on it
- With your table, take 5 minutes to decide:

*In what scenarios, if any, is it **impossible** to provide the address via structured address fields?*

Address Structure

- Pass these scenarios to the next table
- With your table, take 5 minutes to decide:

*Can your group think of a way to turn **unstructured addresses** into **structured addresses** in the scenarios provided by the adjacent table?*

- Report back to the group with any solutions you came up with, or with any scenarios you could not resolve

Metering Installation Transformer Information

Noura Elhawary

Metering Installation Transformer Information

- New Fields
  - The following fields were proposed to be added to MSATS

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Transformer Information	CT Configuration	Code to denote information about the configuration of the connection point. First character = accuracy class of the current transformer. Second character = connected ratio of the current transformer. Third character: type of transformer	Participants proposed a large number of fields relating to instrument transformers at the November 2018 workshop; however, AEMO would prefer that this information be concentrated to a minimum of fields and therefore proposes CT Configuration and VT Configuration fields to capture any relevant information.	50% of overall participant responses support AEMO's view to have one single field for CT and VT configuration details Some participants suggested storing more CT and VT fields rather than collating the information into a code, others questioned the integrity of the data. Some participants questioned what is the benefit of the change? This would cause retailer system changes from a billing perspective, and indicated that this will require system changes that will affect retailer billing processes. Others recommended more discussion is needed before forming a view. Another business indicated This information is provided in test reports. There is a concern that combining fields could cause confusion.
Transformer Information	VT Configuration	Code to denote information about the configuration of the voltage transformer (if one exists) at the connection point. First character = accuracy class of the voltage transformer. Second character = connected ratio of the voltage transformer. Third character: type of transformer		

Metering Installation Transformer Information

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Transformer Information	CT Accuracy Class	The accuracy class of the current transformer.	AEMO believes that this information would be better captured in the CT Configuration field.	50% of participant responses support AEMO in adding those newly proposed fields into one single field Some participants see no value in having this field or information, others indicated they prefer having single fields Some participants questioned apart from having less fields what is the benefit of the change? This would cause retailer system changes from a billing perspective.
Transformer Information	CT Connected Ratio	A statement of the connected current transformer ratio.		
Transformer Information	CT Type	An explanation of the type of current transformation used (e.g. "Type A (150 - 300 - 600 / 5)").		
Transformer Information	VT Accuracy Class	The accuracy class of the voltage transformer.	AEMO believes that this information would be better captured in the VT Configuration field.	
Transformer Information	VT Connected Ratio	A statement of the connected voltage transformer ratio.		
Transformer Information	VT Type	An explanation of the type of voltage transformation		

Metering Installation Transformer Information

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Transformer Information	CT Last Test Date	The date on which the current transformer was last tested by the Metering Provider.	Newly proposed field by participants.	60% Overall 80% Metering Businesses	Some participants find the field of no use, as it is not useful for sample testing and questioned Would the date on 'which the current transformer was last tested by the Metering Provider' be based on the accuracy results of the sample?
Transformer Information	VT Last Test Date	The date on which the voltage transformer was last tested by the Metering Provider.			
Transformer Information	CT Next Test Date	The next date on which the current transformer should be tested.	AEMO **does not** believe that this field would be useful and therefore **does not** propose to include it.	80% Overall 100% Distributers 90% Metering Businesses	50% of retailers find use in this field, as it will be important for CT and VT sites, in order to plan outages, it is advantageous when interacting with customers, Enhances customer and industry conversations – especially with disputes, should be mandatory field
Transformer Information	VT Next Test Date	The next date on which the voltage transformer should be tested.			

Metering Installation Transformer Information

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Transformer Information	CT Serial No - A Phase	The serial number of the current transformer connected to the A phase.	AEMO <u>does not</u> believe that this field would be useful and therefore <u>does not</u> propose to include it.	70% Overall 100% Distributors	Some participants would like this field added, one business indicated that this information is required as per AEMO's alternative Testing guidelines Retailers did not have any specific views, some indicated this is up to MCs, others would like more discussion on the topic.
Transformer Information	CT Serial No - B Phase	The serial number of the current transformer connected to the B phase.			
Transformer Information	CT Serial No - C Phase	The serial number of the current transformer connected to the C phase.			
Transformer Information	VT Serial No - A Phase	The serial number of the voltage transformer connected to the A phase.			
Transformer Information	VT Serial No – B Phase	The serial number of the voltage transformer connected to the B phase.			
Transformer Information	VT Serial No - C Phase	The serial number of the voltage transformer connected to the C phase.			

Metering Installation Transformer Information

- To Amend
  - The following fields were proposed for amendment

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Transformer Information	Transformer Location	Details the existence of instrument transformers and their location relative to the market connection point.	AEMO believes that, if these fields are retained at all (i.e. if they are sufficiently useful to be kept), then these fields should be split into current and voltage transformers separately to ensure higher-quality validations on the data.	60% Overall 80% Distributors 90% Metering Businesses	80% Distributors would like this field removed as they see no value for it 90% Metering business find the information useful and should be kept 60% Retailers agree with AEMO's view This information should be mandatory for type 1 &2 meter.
Transformer Information	Transformer Ratio	Statement of the available and applied transformer ratios.			
Transformer Information	Transformer Type	Explanation of the type of transformation used.			

Metering Installation Transformer Information

- Please go to the table with your number on it.
- With your table take 5 minutes to decide:

Can you think of reasons or scenarios where splitting the following metering installation transformer information fields in MSATS into CT and VT adds more value to your business and customers rather than having them in one field?

- *Transformer location*
- *Transformer accuracy class*
- *Transformer type*
- *Transformer ratio*

Metering Installation Transformer Information

- Please pass the instances to the next table.
- *With your table take 5 minutes to decide:*

What type of validations can we add to the following transformer information to ensure better data quality (noting that some of the following information is currently optional in MSATS)?

- *Transformer location*
- *Transformer accuracy class*
- *Transformer type*
- *Transformer ratio*

Metering Installation Transformer Information

- Please pass the instances to the next table.
- *With your table take 5 minutes to decide:*

The following new transformer information fields were proposed in the 2018 workshop:

- *CT Serial No - A Phase, CT Serial No - B Phase, CT Serial No – C Phase*
- *VT Serial No - A Phase, VT Serial No - B Phase, VT Serial No – C Phase*
- *CT Next Test Date*
- *VT Next Test Date*
- *CT Last Test Date*
- *VT Last Test Date*

Based on the recent feedback received from participants, the majority see no value in adding those fields to MSATS, therefore AEMO proposes not to add them, Do you have strong reasons to support the addition of any of them?

Lunch

Metering Installation Information

Jordan Daly

Metering Installation Information

- New Fields
  - The following fields were proposed to be added to MSATS

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering installation information	Disconnection Method	Enumerated list describing the method by which the meter at that point for that NMI was most recently disconnected.	This field was proposed in the workshop, but this information is discoverable at the moment through looking at the meter status and NMI status fields. AEMO does not support inclusion of this new field.	60% Overall 90% Distributors 90% Metering Businesses	The field will be useful for various reasons including: understanding if the NMI was disconnected from pole-top, etc, data can be used to raise a reconnection of correct type, identify risks around unauthorised usage and vacant sites, assist retail businesses to monitor the DB disconnection processes. Meter and NMI status do not uniquely identify all disco methods
Metering installation information	Meter Family Failure		Enumerated list to indicate whether meter family failure is present, Do we need it?	60% Overall 90% Retailers	The communication of this information is happening successfully outside of MSATS and therefore it does not need to be in MSATS considering the cost vs benefit.

Metering Installation Information

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering installation information	Meter Locks	Enumerated list to denote the presence of locks on the metering installation.	AEMO proposes that, if this field is included, it should be made mandatory, potentially with a several-year transition period in which "Unknown" is an allowable enumeration.	55% Overall 90% Retailers	Some participants currently store the information in Additional Site Information field, others indicated that they obtain the information by asking customers, others said it should be stored in Meter Hazard or Meter Location field, and some highlighted the cost involved with updating this field.
Metering installation information	Plug-In Meter flag	Y/N flag to indicate whether the meter is a plug-in meter, where "Y" indicates that the meter is a plug-in meter.	These meters will only exist in some jurisdictions and in limited proportions, so AEMO does not believe that the inclusion of this information is appropriate.	50% Overall 100% Distributors	Some Participants see value in adding this field to help with meter exchanges, useful in instances where field visits must be aborted as it was not known that a plug-in meter was required to avoid wasted visits.

Metering Installation Information – New fields

- *With your table take 5 minutes to discuss the following:*

Disconnection Method, Meter Family Failure and Meter Locks are proposed enumerated fields

- *Do the benefits of these fields outweigh the costs given they sometimes can be through other fields and means already?*
- *If so, what enumerations are your table proposing that couldn't be included in any other field?*

The inclusion of a Plug-In Meter flag had mixed support. AEMO does not support adding this field. Are there other fields in which this information can be indicated?

Metering Installation Information

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Metering installation information	Meter Test Report	A pdf of the most recent meter test report.	Instead of the "meter test result accuracy" field, which does not give test points, AEMO proposes that a pdf of the most recent meter test report be uploaded.	75% Overall 100% Distributors 80% Metering Businesses	There is high complexity in adding PDFs to MSATS There could be a privacy breach consequences as the PDF of the most recent test report could include customer information.
Metering installation information	Minimum interval length	The minimum interval at which the meter can record data.	See "Meter Read Type Code".	90% Overall	There is no value in adding this field, fields other than Minimum Interval Length could deliver this information. The provision of this information could also be misleading.

Metering Installation Information – New fields

Given most respondents didn't see value in these new fields as-is, proponents are welcome to formally make a case for them during the consultation

Metering Installation Information

- To Amend
  - The following fields were proposed to be amended

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Hazard	Code identifying hazards associated with reading the meter	AEMO proposes that this field be renamed "Site Hazard" to incorporate information that is currently stored in "Additional Site Information".	60% Overall 90% Retailers	Suggest clarifying the meaning of the field No Use of keeping it in MSATS as it is covered through B2B Field should be R/M and made free text
Metering Installation Information	Meter Manufacturer	The manufacturer of the installed meter.	AEMO proposes that this field be made mandatory and be validated to ensure data quality.	70% Overall 80% Retailers	Metering providers own the meter, so this field is of no benefit to other non-contracted parties.
Metering Installation Information	Meter Model	The meter manufacturer's designation for the meter model.	AEMO proposes that this field be made mandatory and be validated to ensure data quality.	70% Overall 80% Retailers	Metering providers own the meter, so this field is of no benefit to other non-contracted parties.

Metering Installation Information – New fields

- *With your table take 5 minutes to discuss the following:*

Meter Manufacturer and Meter Model are fields with information held by MPs – what value is there in these fields being available for the market?

AEMO is proposing that Meter Hazard and Additional Site Information be merged into a field called "Site Hazard" with a more thorough description in order to improve data quality and efficiency – are there any reasons this shouldn't occur?

Metering Installation Information

- To Amend - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Point	Identifies the order of the meter uniquely for the NMI	AEMO proposes that this field be made mandatory and be validated to ensure data quality.	50% Overall 90% Retailers	Field is only useful only for MDPs, it will be costly to maintain it and it adds no value to no one, the relationship between meter and meter suffix already exists Some NMI's have over 20 meters
Metering Installation Information	Meter Program	A description of the program used to initialise the installed meter	AEMO proposes that this field be amended to instead be a code. First character = time of day Second character = interval length at which the meter is currently recording	40% Overall 80% Retailers	The field is of no use specially for type 5 ad 6 meters, and it is only useful for MPs. Better to remove the field

Metering Installation Information

- To Amend - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Read Type Code	Code to denote the method and frequency of Meter Reading.	AEMO proposes that this field be made mandatory and, as per the Issues and Change Form raised by AGL at the Electricity Retail Consultative Forum, AEMO proposes that the fourth character be used to identify whether the meter is capable of reading at five-minute granularity.	60% Overall 100% Retailers	Field is only useful for MDPs who read the meters. Field includes too many data elements which would require complex logic to ensure the accuracy of information being provided. No benefit for participants who only deal with Basic Meters
Metering Installation Information	Meter Use	A code identifying how the meter is used.	AEMO proposes that this field be made mandatory and be validated to ensure data quality.	40% Overall 80% Retailers	Some participants don't use the field. How will AEMO validate the data

Metering Installation Information – New fields

- *With your table take 5 minutes to discuss the following:*

Meter Point, Meter Program and Meter Use were fields where a majority of participants indicated a preference for removal or non-amendment – what value is there in these fields being available for the market?

Metering Installation Information

- To Amend - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Metering installation information	Meter Test Result Accuracy	The accuracy figure from the meter test performed on the date indicated in the Last Test Date field.	AEMO views that this field should be amended to instead be a combined test date and pass / fail flag (e.g. a successful test on 1 January 2020 could be coded as 202001011).	80% Overall 100% Distributors 90% Metering Businesses	Many participants indicated they do not use this field and suggested it should be removed, other clarified that they use sample testing and it is hard to give individual results.
Metering installation information	Next Test Date	Next date on which the meter should be tested.	AEMO proposes that this be made mandatory.	70% Overall 100% Distributors 50% Metering Businesses	Testing date will depend on the MC for the site which could change. Whole current meters will be sample tested. Family that meter is in could change. If included will means some meters will need to be updated as the MC role changes.

Metering Installation Information

- To Amend - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Metering installation information	Last Test Date	The date on which the metering installation was last tested or inspected by the Metering Provider "B". This date will be used if clause 7.9.4(a) of the NER needs to be applied.	The definition currently refers to inspection and testing. AEMO proposes that this definition be clarified to refer only to testing.	40% of overall participants agree with AEMO's analysis Some participants indicated that the field is not useful for them as they use sample testing and it is hard to give individual results, and that this information is more relevant to a meter fleet outside of Type 5 & 6, others indicated that they do not believe that this information is required in MSATS because it is available to AEMO via the MAMP and MPB audit.
Metering installation information	Meter Constant	The meter KE (intrinsic constraint of meter in Wh/pulse).	AEMO proposes that this field be made mandatory	40% of overall participants agree with AEMO's analysis Some participants see no benefit in having it as a standing data as it is only beneficial for MPs, others suggested clarifying the definition of the field.

Metering Installation Information – New fields

- *With your table take 5 minutes to discuss the following:*

Meter Test Result Accuracy, Last Test Date, Next Test Date and Meter Constant were fields where a majority of participants indicated a preference for removal or non-amendment – what value is there in these fields being available for the market?

Register-level Information

Nandu Datar

Register-level Information

- To Amend
  - The following fields were proposed to be amended

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Register level information	Controlled Load	Indicates whether the energy recorded by this register is created under a Controlled Load regime.	The data in this field are low-quality and irregular; AEMO therefore believes that this field should be made enumerated as a "Yes"/"No" field. Further, Endeavour Energy submitted an ICF (ICF_009) to have this field be enumerated.	7 responses indicated support of Endeavour Energy's ICF to expand the enumeration values. Changing the field to enumerated would require significant process changes.
Register level information	Demand1	This field contains the peak demand value for summer for network Tariff purposes. Units in kW or kVA	Given this field's low population rate, AEMO believes that this field should be made required.	7 responses suggested removal of this field. 2 responses indicated they were not supporting AEMO's view without much explanation. One response raised the issue of accurately populating the field for sites with multiple meters
Register level information	Demand2	This field contains an additional demand value (not Summer period). Units in kW or kVA	Given this field's low population rate, AEMO believes that this field should be made required.	7 responses suggested removal of this field. 2 responses indicated they were not supporting AEMO's view without much explanation. One response raised the issue of accurately populating the field for sites with multiple meters

Register-level Information

- To Amend - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Register level information	Time Of Day	Code to identify the time validity of register contents. As published by each LNSP.	The data in this field are low-quality and irregular; AEMO therefore proposes that this field be incorporated into the Meter Program field.	Suggest removing the field Retain the field and improve data quality, define a list of allowable values and avoid making changes for changes sake Leave the field unchanged as it is used for the full consumption for the billing period Changing will require significant changes to existing processes Used for NUOS and end user billing and must not change Meter program field is not at register level field and this information must be held at register level.

Register-level Information

- Please go to the table with your number on it.
- With your table take 5 minutes to decide:

In relation to the 'Controlled Load' field, please consider the pros/cons of the 2 options below and recommend the option most beneficial to the industry

- *AEMO proposed enumerated values 'Yes' or 'No'*
- *Endeavour Energy proposed enumerations 'No or CL1 or CL2' (ICF_009)*
- *Another option is that participants annually submit their individual Controlled Load values (EG: like CL1 and CL2 for Endeavour). Much like with DLFs, this means that there would be regular config rather than schema updates*

Register-level Information

- Please pass the instances to the next table.
- With your table take 5 minutes to decide:

  In relation to fields 'Demand1' and 'Demand2' please consider the pros/cons of making the field 'Required' against removing the field.

  Also consider how the field is populated for sites with multiple meters and renaming the fields Demand – Summer and Demand Non-Summer

Register-level Information

- Please pass the instances to the next table.
- With your table take 5 minutes to decide:

In relation to the 'Time of Day' field, please consider the pros/cons of the following options below and recommend the option most beneficial to the industry

- *Incorporate the field into the Meter Program field*
- *Remove the field*
- *Improve data quality (how?)*
- *Enumerate the field (define allowable values)*
- *Leave unchanged*

Connection and Metering Point Details

Arjun Pathy

Connection and Metering Point Details

- Go to the table with your number on it.

Connection and Metering Point Details

- New Fields
  - The following fields were proposed to be added

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Connection and Metering Point Details	Asbestos	A Y/N flag indicating the presence of asbestos.	AEMO proposes that, if this field is included, it should be made mandatory, potentially with a several-year transition period in which "Unknown" is an allowable enumeration.	60% Overall 90% Metering Businesses 80% Retailers	The term asbestos is too broad, and the meter readers are not qualified in asbestos which can lead to providing false information and lead to legal proceedings Queensland customers are responsible for the metering installation

Connection and Metering Point Details

- With your table, take **three minutes** to generate any material problems your group can foresee for the scenario:

An "Asbestos" field is created with a default value of "Unknown", which must be updated to a mandatory Y/N within a transition period to be determined in consultation.

Connection and Metering Point Details

- Pass your table's problems to the table with the next highest number (i.e. if you are table 5, pass your problems to table 6).
- Take **five minutes** to generate solutions to the problems you have received.
- Bring your resolved and your unresolved problems up the front in two separate piles.

Connection and Metering Point Details

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Connection and Metering Point Details	Connection Configuration	Code to denote information about the configuration of the connection point.	AEMO proposes this new field to incorporate multiple information	50% Overall 90% Retailers	The data to be captured is quite complex and might not be accurate or valid Suggestion to have the values in different fields

Connection and Metering Point Details

Character No.	1	2	3	4	5
Stands for	Connection Type	Phase Availability	Presence of Isolation Points	Presence of CT	Presence of VT
Enumerations	W = Whole Current L = Low Voltage H = High Voltage	1 = Single Phase 2 = Two-Phase 3 = Three-Phase	S = Shared isolation points N = No shared isolation points	C = Current Transformer N = No Current Transformer	V = Voltage Transformer N = No Voltage Transformer

- Take a sticky note, and **in one minute** write your organisation's name on it, and come up the front to place a vote for:

  Should the information proposed to be contained in the third character (Presence of Isolation Points) be provided by the MPB or the LNSP?

- AEMO will very much appreciate it if you include a reason for your vote! Your reasoning will inform AEMO's position in the Issues Paper.

Connection and Metering Point Details

Character No.	1	2	3	4	5
Stands for	Connection Type	Phase Availability	Presence of Isolation Points	Presence of CT	Presence of VT
Enumerations	W = Whole Current L = Low Voltage H = High Voltage	1 = Single Phase 2 = Two-Phase 3 = Three-Phase	S = Shared isolation points N = No shared isolation points	C = Current Transformer N = No Current Transformer	V = Voltage Transformer N = No Voltage Transformer

- Take a sticky note, and **in one minute** write your organisation's name on it, and come up the front to place a vote for:

Would you prefer that "Whole Current" and "Low Voltage" be separate options or combined into one option called "L = Low Voltage", especially given that CT and VT information is separately provided in characters 4 and 5?

- AEMO will very much appreciate it if you include a reason for your vote! Your reasoning will inform AEMO's position in the Issues Paper.

Connection and Metering Point Details

Character No.	1	2	3	4	5
Stands for	Connection Type	Phase Availability	Presence of Isolation Points	Presence of CT	Presence of VT
Enumerations	W = Whole Current L = Low Voltage H = High Voltage	1 = Single Phase 2 = Two-Phase 3 = Three-Phase	S = Shared isolation points N = No shared isolation points	C = Current Transformer N = No Current Transformer	V = Voltage Transformer N = No Voltage Transformer

- Take a sticky note, and in one minute write your organisation's name on it, and come up the front to place a vote for:

Would you prefer that this information be provided all in separate fields or in one codified field as proposed?

- AEMO will very much appreciate it if you include a reason for your vote! Your reasoning will inform AEMO's position in the Issues Paper.

Connection and Metering Point Details

Character No.	1	2	3	4	5
Stands for	Connection Type	Phase Availability	Presence of Isolation Points	Presence of CT	Presence of VT
Enumerations	W = Whole Current L = Low Voltage H = High Voltage	1 = Single Phase 2 = Two-Phase 3 = Three-Phase	S = Shared isolation points N = No shared isolation points	C = Current Transformer N = No Current Transformer	V = Voltage Transformer N = No Voltage Transformer

- Take a sticky note, and **in one minute** write your organisation's name on it, and come up the front to place a vote for:

Should character 2 be split into two characters for "phases supplied" and "phases in use"?

- AEMO will very much appreciate it if you include a reason for your vote! Your reasoning will inform AEMO's position in the Issues Paper.

Connection and Metering Point Details

Character No.	1	2	3	4	5
Stands for	Connection Type	Phase Availability	Presence of Isolation Points	Presence of CT	Presence of VT
Enumerations	W = Whole Current L = Low Voltage H = High Voltage	1 = Single Phase 2 = Two-Phase 3 = Three-Phase	S = Shared isolation points N = No shared isolation points	C = Current Transformer N = No Current Transformer	V = Voltage Transformer N = No Voltage Transformer

- If you have any concerns that have not been addressed during the "snap voting" rounds, please take **one minute** to write them on a post-it note and put them on the "other concerns" card up the front.

Connection and Metering Point Details

- To Remove
  - The following fields were proposed to be removed

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Connection and metering point details	Additional Site Information	Descriptive of the Site, describing Site access and the relationship between the metering point and the connection point.	To be removed and that those other pieces of information be formally added as separate structured fields.	50% of overall participants supported AEMO's view Some recommend leaving this field to capture site visits and all the different scenarios Some support keeping this field as it is not possible to single out information contained in this field into separate structured fields, and suggest that some guidance on its use should be provided.

Connection and Metering Point Details

- Go to the table with your number on it.
- Remembering that all participants agreed that data should be **complete**, **useful**, and **accurate**, is there any information currently stored in Additional Site Information that you believe is important enough to warrant the creation of a new field? Discuss on your table for **three minutes**.

Connection and Metering Point Details

- Remembering that no validations can be put on the Additional Site Information field, is there any information currently stored in Additional Site Information that you could not move to one of your proposed new fields that you believe is necessary to be included in MSATS? Discuss on your table for **three minutes**.

Connection and Metering Point Details

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Connection and Metering Point Details	Switchboard Photo	A photo of the switchboard, as at the most recent site visit.	AEMO asks whether this would be useful, either in addition to or to the exclusion of the "Switchboard Size" field below.	70% Overall 90% Distributors	Storing this information would cause data collection and storage issues. It may be a duplicate if the same information is provided in connection configuration, and switchboard size fields
Connection and Metering Point Details	Switchboard Size	The width and height of the switchboard (to the nearest centimetre).	AEMO proposes that, if this field is included, it should be made mandatory, potentially with a several-year transition period in which "Unknown" is an allowable enumeration.	80% Overall 100% Distributors 100% Metering Businesses	It is be too complex to train staff as different jurisdictions have different standards for switchboard so this information might be quite complex to make use of.

Connection and Metering Point Details

- New Fields - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Meter communications information	Type 4A Reason	An enumerated list indicating whether the meter is Type 4A due to the lack of a telecommunications network of due to small customer refusal.	This field was proposed in the workshop; however, AEMO does not believe that this field would add value and therefore does not propose to include it.	The participants indicating their support of including this field provided the following vieews, - Useful in dealing with customers - needs in C7 information - Useful in planning for conversion from 4A to 4 - Useful for reporting purposes - differenciate between no signal and customer refusal - deliver operational and industry efficiencies - allows opportunity to upgrade meter to comms - determine areas with communication issues

Afternoon Tea

Metering Installation Location Information

Arjun Pathy

Metering Installation Location Information

- New Fields
  - The following fields were proposed to be added

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Metering installation location information	GPS Coordinates	GPS coordinates of the metering installation.	It was raised in the workshop that this may be unhelpful for some hard-to-find meters (e.g. if GPS coordinates are only provided for the shopping centre itself, this may not help with finding the meter)	50% of overall participants support the addition of this new field, and see value in Adding it specially for rural areas. GPS coordinates need to be related to the physical location of the metering point to ensure value, however significant funding would be required to enable the collection, validation, storing and provision of this information. Need to consider cost vs benefit, and making the field required rather than mandatory if added.

Metering Installation Location Information

- Form a group with everyone else who has the same colour tag. Split into ENMs + Retailers and Metering + LNSPs.
- In your split groups, write down **in five minutes**:

For which NMIs should this information be mandatory (i.e. a "must have"), where should it be required (i.e. a "nice-to-have"), and where is it not useful at all?

Metering Installation Location Information

- Come back together and **in five minutes** form a combined "must-have", "nice-to-have" and "not useful" list. Bring this up the front when you're done.

Metering Installation Location Information

- New Fields - continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participant Views
Metering installation location information	Earliest expiring device		AEMO asks participants whether this is more useful than the "last test date" field or whether both are useful in different ways.	60% pf participants see no value in adding this field. Other are unclear about the purpose of it. Some participants finds it valuable to forecast accurate end-of-life meters and forward planning of roll-outs, they consider this data to be more important than Last Test Date in case of small customer. it will also be useful for scheduling collaboration with MC.

Metering Installation Location Information

- Form a group with everyone else who has the same letter as you.
- In your group, write down **in five minutes**:

  Where is "Last Test Date" useful? Where is "Earliest Expiring Device" useful?

Metering Installation Location Information

- To Remove
  - The following fields were proposed to be removed

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Disagreement with AEMO's Analysis	Other Participant Views
Metering installation location information	Meter Location	Descriptive material identifying the relationship between the location of the metering point and the connection point.	AEMO asks for participant feedback on whether they see this field as useful given that no validations could be placed on its data given the open-ended nature of possible responses. Suggest Removing the field.	80% Overall 90% Retailers	The field is useful to find the location of the metering point and in advising customers of their meter location, suggestion for the field to be made required or mandatory and possibly with drop down menu

Metering Installation Location Information

- Form a group with everyone else who has the same number as you.
- In your group, write down **in five minutes**:

  How could data in this field be improved, given that validations cannot be imposed?

Schedule 7.1 Rule Change

Jordan Daly

Schedule 7.1 Context:

- Currently, Sch 7.1 contains a list of information that should be included in the metering register.
- This issue with this list is that it is not accurate to current market operations and it requires a Rules consultation to update
- The operative provision requiring AEMO to include this information is in clause 7.12.1.
- The schedule (S7.1.1) itself is descriptive only and the list (S 7.1.2) reflects what should be in the metering register
- These can be moved to the MSATS Procedures
- This will improve market efficiency while maintaining consumer and participant protections

Feedback regarding the 3 fields referred to in the NER that aren't in MSATS

Participants who agree with AEMO's view	All respondents but one retailer and one metering coordinator agreed with AEMO's view or had no objection to it.
Summary of other participants views	Several participants suggested this field is potentially useful for other market reforms or for customers. These participants did not expand on which reforms or customers would find this field useful. Some other participants held their comments entirely. One participant requested the field remain optional if it is not removed
Additional Questions - follow up for AEMO	AEMO welcomes participants to elaborate on the scenarios or specific reforms by which an existing field that AEMO is proposing should be removed should remain. AEMO requests participants provide an ICF if they wish to see the introduction of new fields they believe would be useful.

S7.1 Feedback

Participants who agree with AEMO's view	Summary of other participants views
All but 1 of the metering and miscellaneous respondents were supportive of the proposed changes (75%). All but three retailers were supportive of the proposed changes (63%). All but 1 of the distributors were supportive of the proposed changes (89%).	Some concerns about what obligations are in place to ensure data accessibility and enforce obligations on responsible participants. One objection was that the NER provides an end-to-end reference and is less narrow and more technical than the MSAT Procedures. The need for change wasn't clear for most participants.

Option 1: S7.1.2 refers to MSATS Procedures

NER Clause 7.12.1 Metering register

Unchanged

Clause S7.1.1

Unchanged

Clause S7.1.2

The Market Settlement and Transfer Solution Procedures [or other procedure] must specify the *Metering* information to be contained in the *metering register*.

Option 2: S7.1 updated and moved to MSATS Procedures

NER Clause 7.12.1 Metering register

(a) As part of the *metering database*, *AEMO* must maintain a *metering register* of all *metering installations* and *check metering installations* which provide *metering data* used for *settlements*.

(b) The *metering register* referred to in paragraph (a) must contain the information specified in ~~Schedule 7.1.~~ the *Market Settlement and Transfer Solutions Procedures*.

Schedule 7.1

Schedule 7.1 to be incorporated into the Market Settlement and Transfer Solutions Procedures and removed from the NER

Option 3: S7.1.2 is amended rather than removed

NER Clause 7.12.1 Metering register

Unchanged

Schedule 7.1

AEMO to submit Rule change proposal following the MSATS Standing Data Review workshop to make Schedule 7.1.2 a description of what should be in MSATS *at a minimum*.

S7.1 - Voting

Options:

1) Leave S7.1.1 untouched, rework S7.1.2 and Clause 7.12.1 to refer to the "MSATS Procedures";
2) Remove all of Schedule 7.1 and Clause 7.12.1 to refer to the "MSATS Procedures" or
3) Change the NER to refer to the minimal amount of information MSATS must hold and provide a more fulsome list in the MSATS Procedures.

Notes:

- AEMO would prefer the rule change request be included in the scope of the AEMC's Power of Choice review
- While options 1 and 2 are simpler, option 3 is more likely to be acceptable for the AEMC

Forecasting Related Fields

- New Fields - continued

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	AEMO's Analysis	Participant Views
NMI Details	Physical TNI Code	The code for the physical TNI to which this connection point has been assigned. This value must correspond to a valid code in the CATS_TNI_Codes table.	AEMO increasingly requires access to this data in order to perform the requisite modelling and forecasting for an increasingly complex two-way grid. This benefits industry as a whole by proving an integrated roadmap for the efficient development of the NEM.	40% agree with AEMO	"This would always be the same as the TNI Code field for us, it should default to the TNI or be made optional or removed." "Do not agree – provision of additional information to the TNI Code field is not available." "No. Participant would not be able to maintain this field in circumstances where a NMI is connected to a virtual TNI" "Do not agree – provision of additional information to the TNI Code field is not available." "This may not work effectively in many areas and may also require the use of a virtual connection point for urban areas where load is regularly shifted across physical TNIs" "Participant does not support the introduction of this new field as it will require significant changes to our systems." "No because we do not believe this applies to Queensland. "

Forecasting Related Fields

- New Fields - continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	Transmission connection point	The closest point at which the connection point connects to the transmission network. If there is no bulk supply point / physical connection point, this field should be the code for the physical TNI and must correspond to a valid code in the CATS_TNI_Codes table. If there is a bulk supply point / physical connection point, this field should be the code for that point and must correspond to a valid code in the CATS_Transmission_Connection table.	AEMO increasingly requires access to this data in order to perform the requisite modelling and forecasting for an increasingly complex two-way grid. This benefits industry as a whole by proving an integrated roadmap for the efficient development of the NEM.	56% Overall 80% Retailer	Not applicable to transmission so it cannot be made mandatory if it is not removed. Provision of additional information to the TNI Code field is not available. What is the CATS Transmission Connection table? The TNI code provides sufficient information on the transmission/distribution connection. This may not work effectively in many areas and may also require the use of a virtual connection point for urban areas where load is regularly shifted across physical TNIs It will require significant changes to systems to populate it for typical distributions sites where it is not relevant.

Forecasting Related Fields

- New Fields - continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	Zone substation	The zone substation to which this connection point has been assigned.	AEMO increasingly requires access to this data in order to perform the requisite modelling and forecasting for an increasingly complex two-way grid. This benefits industry as a whole by proving an integrated roadmap for the efficient development of the NEM.	64% Overall 70% Retailer	This field is not applicable to transmission so it cannot be made mandatory if it is not removed. AER approved funding required to provide this information for all NMI's. Do not agree. Networks are reconfigured constantly as short-term and long-term needs change. The connection point information in isolation appears to have little value without knowledge of the relationship to the rest of the network. The cost and amount of work required in monitoring and updating these fields in MSATS does not seem to be beneficial. This may not work effectively in many areas and may also require the use of a virtual ZS for urban areas where load is regularly shifted across physical Zone Substations It will require significant changes to systems. No benefit in maintaining it in MSATS as it is an internal code.

Forecasting Related Fields

- New Fields - continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	Distribution substation	The distribution substation to which this connection point has been assigned.	AEMO increasingly requires access to this data in order to perform the requisite modelling and forecasting for an increasingly complex two-way grid. This benefits industry as a whole by proving an integrated roadmap for the efficient development of the NEM.	52% Overall 80% Retailer	Not applicable to transmission so it cannot be made mandatory. AER approved funding required to provide this information for all NMI's. Requires significant system changes. No benefit in maintaining in MSATS as it is an internal code.

MSATS Standing Data Review Industry Workshop

3-4 February 2020

Day 2

Agenda

No.	Agenda item	Discussion lead	Time
Day 2 – 4th February 2020			
Arrival (coffee and tea provided)			8:45 – 9:00
1	Welcome, introductions and housekeeping	Michelle Norris (AEMO)	9:00 – 9:10
2	Summary of Day 1*	Michelle Norris (AEMO)	9:10 – 9:50
3	Embedded Networks Update	Noura Elhawary (AEMO)	9:50 – 10:00
Morning tea			10:00 – 10:15
4	Forecasting Presentation	Linton Corbet (AEMO)	10:15 – 10:30
5	Consumer Data Right	Aakash Sembey, David Havyatt	10:30 – 10:45
6	Address remaining issues from complex topics and prioritisation (dependant on outcomes from day 1) + consultation and implementation options*	Meghan Bibby (AEMO)	10:45 – 12:30
Lunch			12:30 – 13:00
7	Shared fuses - AEMC Draft Determination	Doug Ross (CMIG)	13:00 – 13:15
8	Address Information	Christophe Bechia (Red)	13:15-13:45
9	Remaining issues from day 2*	Meghan Bibby (AEMO)	13:45-15:00
10	Wrap up and next steps	Michelle Norris (AEMO)	15:00– 15:30
* The outcomes and agreements reached from these sessions are available in the “Workshop Outcomes” slide pack.			

Welcome, Introductions and Housekeeping

Michelle Norris

Day 1 Wrap Up

Michelle Norris

Forecasting Fields

TNICODE

Linton Corbet

TNICODE

AEMO wants to link each customer connection to its location in the network.

This will support the planning and forecasting studies with ability to adequately map customer demand and distributed energy resources to transmission assets.

- With Australia's energy landscape experiencing significant disruptive, transformational changes, designing an energy system that addresses and harnesses these changes has become a key focus for our organisation.

- AEMO provides the detailed, independent planning, forecasting and modelling information and advice that drives effective and strategic decision-making, regulatory changes and investment.

The TNICODE can be virtual

- Where TNICODE is virtual the link between customer connection and network location is missing.

- AEMO is proposing to:
  - **Continue** the use of virtual TNICODES for settlement.
  - **Add** a field that holds the physical TNICODE.

- And also considers supporting the physical node information:
  - Can a transmission connection point identifier be included (where there are multiple TNIs at a single substation)?
  - Can the customer connection's zone substation be included?
  - Can the customer connection's distribution substation be included?

The Network is Physical

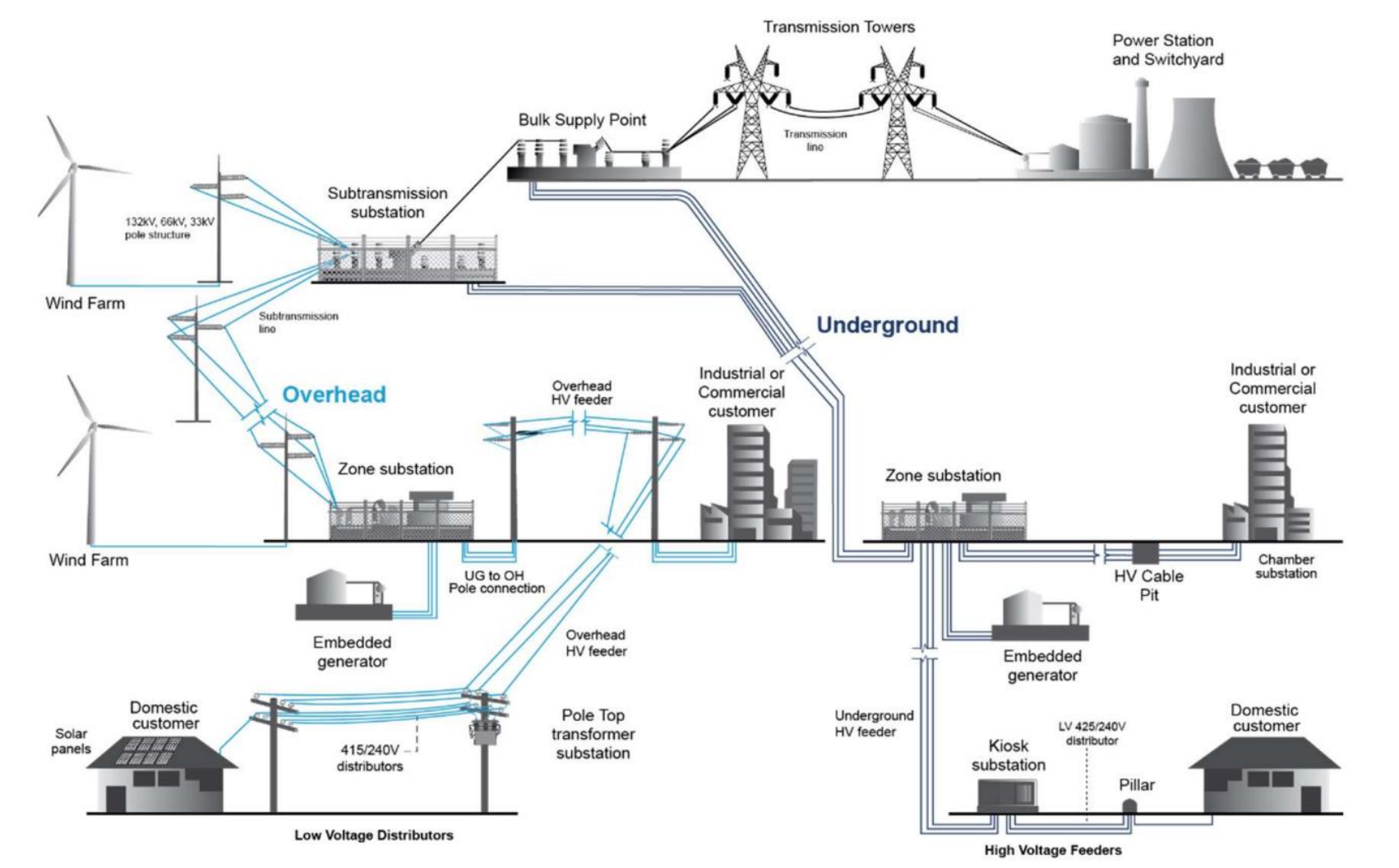

Figure source: Ausgrid DTAPR 2018.

PHYSICAL TNICODE

- Please go to the table with your number on it
- With your table, take 5 minutes to decide:

In what scenarios, for consumers and generators, can no physical TNICODE be assigned?

PHYSICAL TNICODE

- Pass these scenarios to the next table
- With your table, take 5 minutes to decide:

What would be the pitfalls when assigning a physical TNICODE to each customer connection, based on system-normal network operation?

- Report back to the group with any solutions you came up with, or with any scenarios you could not resolve

Morning Tea

Embedded Networks Reform Impact on MSATS Standing Data

Noura Elhawary

Embedded Networks Reform Impact on MSATS Standing Data

- The AEMC published its final report on Updating the Regulatory Frameworks for Embedded Networks which can be found here:

https://www.aemc.gov.au/market-reviews-advice/updating-regulatory-frameworks-embedded-networks

- Potential new information to be captured as part the Embedded Network Regulatory Framework Reform:
  - Embedded Network Service Provider (ENSP)
  - Off-market Retailer
  - Embedded Network Area
  - Local Embedded Network Retailer
  - AEMO to establish a shadow network charges database, the database to include network charges to be provided by the DNSPs

    (Note: AEMO is not required to verify the accuracy of information provided to it for publication in the shadow network charges database)
  - Off-market connection points with off market retailers, off-market connection points to be discoverable in MSATS
  - Default ROLR for off-market connection points

CDR Presentation

David Havyatt, Data61
Aakash Sembey, Data61

Consumer Data Right

AEMO to be the data holder. Implementation linked to Global Settlements (6 Feb 2022). Data standards expected in 2020

Revised timeline update:

https://www.accc.gov.au/media-release/consumer-data-right-timeline-update

Consumer Data Standards:

https://consumerdatastandardsaustralia.github.io/standards/#introduction

Gartner Summit:

https://www.gartner.com/en/conferences/apac/data-analytics-australia/speakers

Address remaining issues from complex topics

Meghan Bibby

Shared fuses
AEMC Draft Determination

Doug Ross

Shared Fuses – AEMC Draft Determination

Doug Ross, CMIG

- Based on this draft determination rule drafting: https://www.aemc.gov.au/news-centre/media-releases/draft-rule-reduce-meter-installation-and-repair-timeframes-customers
- A flag to indicate shared fuses may not necessarily reflect the obligations associated with a shared fuse
- Preferable that Rules don't specify the means by which a shared fuse is indicated in systems
- Feedback to be provided to AEMC (submissions close 13 Feb)

Topic areas where there was general agreement with AEMO's Analysis

Nandu Datar

Topic areas where general agreement with AEMO's Analysis

- To Amend
  - The following fields were proposed to be amended

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter read and estimation information	Next Scheduled Read Date	Indicates the Scheduled Next Read Date for the meter if a manual Meter Reading is required.	AEMO proposes that this field be made required for all manually read meters.	96% Overall	3 of the responses agreeing with AEMO have suggested making this field mandatory instead of required
NMI Details	TNI Code	This value must correspond to a valid code in the CATS_TNI_Codes table.	Given that AEMO is proposing the addition of a physical TNI code below, AEMO proposes that the definition for this field be amended to include: "If a virtual TNI is used for this NMI, this field should use the TNI code for that virtual TNI. If only the physical TNI is used for this NMI, this field should use the TNI code for that physical TNI." TNI description to be updated	84% Overall	If a virtual TNI is allocated to a Type 7 NMI, the virtual TNI consists of a number of physical TNIs, therefore in a one NMI to many connection point relationship, this cannot be achieved. If a virtual TNI is used where load is shifted around across TNIs, then this field would be populated and the Physical TNI field may identify the predominant physical TNI the load is connected to (eg default TNI). If only a physical TNI is used, does this field need to be populated ?

Topic areas where general agreement with AEMO's Analysis

- To Remove
  - The following fields were proposed to be removed

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Asset Management Plan	If a Site plan is used, description of plan. If a sample plan is used, the name of the AEMO approved plan.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	80% Overall 100% Distribution and Metering Businesses 90% Retailers	It is unclear from the description provided just what is intended to be captured However, identification of current information could make industry processes more efficient.
Metering Installation Information	Calibration Tables	Details of any calibration factors programmed into the meter.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	100% Overall	NA

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Route	The route identifier the meter is currently being read in.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Considering there's almost 70% of NMIs that has this data, this should be retained.
Metering Installation Information	Meter Test Calibration Program	Meter test & calibration program.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Field might be important for large sites in particular
Metering Installation Information	Meter Test Result Notes	A statement of compliance indicating the standard of the test regime applied at the time of the last test.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	80% Overall	This field might be important for large sites in particular. A participant indicated that they use the field for summarising the outcome of the meter test – eg pass / fail / partial which simplifies analysis of outcomes

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Test Performed By	Identifying the Metering Provider "B" and the technician responsible for conducting the last meter test. The technician is to be identified by a number unique to the Metering Provider "B".	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Field could be made MPB Test ID – and this in turn would identify in the MPB database the test, technician, results etc, this is useful to customers as it allows traceability across multiple parties to ensure retailer can advise customer that a test has or will be conducted
Meter communications information	Communications Equipment Type	Used to store baud rate for installed communication equipment in a code, calculated by dividing the baud rate by 100, of the installed communication equipment	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses indicated disconnect between the field name and its description. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	Communications Protocol	Used to provide details of access through switch units (if installed). Data to include Switch Unit, Dial Pkg, Port#, userid, password	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses did not support removal of this field as it is useful to them. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.
Meter communications information	Data Conversion	Actual Pulse Multipliers	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses indicated they were unsure of removing this field and deferred the decision to the metering area. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	Password	Read & time set passwords separated by a space.	A number of meters use dynamic passwords; hence the utility of a static "password" field is questionable. This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	96% Overall	One of the responses indicated their support of removing the field but raised a question if the field was not removed. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.
Meter communications information	Remote Phone Number	The public telephone number to contact a remote Site for metering data. Includes STD prefix and no spaces.	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses did not support removal of this field as it is useful to them. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	User Access Rights	Details of any End User access to the metering installation; examples include pulse outputs, interface to consumer load management system, or consumer directly accessing data in meter by special agreement.	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	89% Overall	Two responses indicated its useful for Consumer Data Right Another response indicated this will enable effective conversation with customers and timeliness of work
Meter read and estimation information	Data Validations	Description of required data validations	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses sought further information on the use of this field. Another response indicated that they would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter read and estimation information	Estimation Instructions	Estimation instructions	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses sought further information on the use of this field. Another response indicated that they would prefer to hold their comment until further discussion.
Meter read and estimation information	Measurement Type	Code based on the NMI suffix codes, indicating the type of measurements available from the meter. For example, EBQK = bidirectional energy plus reactive Interval Meter.	This field is currently sparsely populated and the data are very low quality, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	85% Overall	Those not supporting AEMO's view indicated the following, - to determine appropriateness for the end user. - use it for special cases provided it is in a structured format. - meter configuration for DER and solar works

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Register level information	Network Additional Information	Free text field.	This field will be difficult to make structured, and it is currently relatively sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	78% Overall	4 participants indicated that they populate this field and hence did not support One response indicated no support without giving any reason One reponse indicated that the field could denote the presence of devices, such as load control

Topic areas where general agreement with AEMO's Analysis

- New Field
  - The following fields were proposed to be added

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering installation information	Meter Commission Date	Meter Commission Date	AEMO proposes not to add this newly proposed field	70% Overall	Adding this field can be useful for new retailers who wins sites that are already active, others indicated that it can be useful when discrepancies around the NMI active date, others indicated it can assist in meter deployment vs billing. Preference would be to change to 130 days

Wrap-up and next steps

Michelle Norris

Parked issues

- Shared fuses
- Customer Site Defect Notice

Topic areas where there was general agreement with AEMO's Analysis

Nandu Datar

Topic areas where general agreement with AEMO's Analysis

No Change

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Status	A code to denote the status of the meter.	100% Overall	NA
Metering Installation Information	NMI	This number is unique for each *connection point* within the *NEM*.	100% Overall	NA
Metering Installation Information	Serial Number	The Meter Serial ID uniquely identifies a meter for a given NMI. Maximum 12 Characters (alpha numeric). Unique for NMI.	90% Overall	A participant suggested having structured naming conventions for dummy meters to assist with asset/light type detail

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Register level information	Consumption Type	Actual/Subtractive Indicator. Actual (A) implies volume of energy actually metered between two dates. Cumulative (C) indicates a Meter Reading for a specific date. A second Meter Reading is required to determine the consumption between those two Meter Reading dates. For an Interval Meter, ActCumInd = A.	96% Overall	The response not supporting AEMO's view indicated they don't have specific use for it and can be removed. Currently they fill it with default value of 'Actual'.
Register level information	Dial Format	Describes the register display format. First number is the number of digits to the left of the decimal place, and the second number is the number of digits to the right of the decimal place.	93% Overall	2 participants not agreeing suggested removing the field.
Register level information	Multiplier	Multiplier required to take a register value and turn it into a value representing billable energy.	93% Overall	2 participants not agreeing suggested removing the field.

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Register level information	Network Tariff Code	The Network Tariff Code is a free text field required. The text must match the Network Tariff Codes supplied and published by the LNSP.	93% Overall	One response not supporting AEMO's view indicated that they use a default value and also suggested this could be an enumerated field Another response suggested separating the network tariff code from the Meter Register Table. The response also indicated number of options that can be explored with AEMO and the industry
Register level information	Register Detail Status	Lookup code to indicate if register is active. Must ensure that RegisterDetail/Status is not Current (C) when ElectricityMeter/Status is Removed (R).	100%	One response recommended alignment to Suffix/Register and Meter to remove fields
Register level information	Register ID	The RegisterID is used to identify a data source that is obtained from the meter. A single meter may provide multiple data sources.	100%	

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Register level information	Suffix	Metering Datastream identifier (for MDM). Identifies each Datastream at the measurement element level for the connection point identified by the NMI.	89% Overall	It would improve the standing data and MDFF disputes and delays in billing, improve communications for replacement of meter 2 responses suggested using enumerated values More validation from AEMO to ensure suffixes comply with the NMI Procedure.
Register level information	Unit Of Measure	Code to identify the unit of measure for data held in this register.	100%	
Address Details	Building / Property Name	A free text description of the full name used to identify the physical building or property as part of its location.	100%	

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Address Details	Flat / Unit Number	Specification of the number of the flat or unit which is a separately identifiable portion within a building/complex.	100%	Transmission business don't use this field
Address Details	Flat / Unit Type	Specification of the type of flat or unit which is a separately identifiable portion within a building/complex.	100%	Use this field selecting Substation, could this default for transmission?
Address Details	Floor / Level Number	Floor Number is used to identify the floor or level of a multi-storey building/complex.	100%	
Address Details	Floor / Level Type	Floor Type is used to identify the floor or level of a multi-storey building/complex.	100%	
Address Details	House Number	The numeric reference of a house or property. Specifically the house number.	92% Overall	Street number and Name should become Mandatory in line with the removal of unstructured, otherwise address can remain suburb/postcode only. Not all connections have a street address.

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Address Details	House Number Suffix	The numeric reference of a house or property. Specifically the single character identifying the house number suffix.	100%	
Address Details	Location Descriptor	A general field to capture various references to address locations alongside another physical location.	100%	
Address Details	Lot Number	The lot reference number allocated to an address prior to street numbering. The word 'LOT' is not required.	100%	New developments start as lot numbers before receiving house numbers. Not all connections have street address.
Address Details	Post Code	The descriptor for a postal delivery area, aligned with locality, suburb or place.	96% Overall	This sometimes is not aligned with the suburb. Are there additional validations which can be done?
Address Details	State / Territory	Defined State or Territory abbreviation.	100%	
Address Details	Street Name	Records the thoroughfare name.	96% Overall	Street number and Name should become Mandatory in line with the removal of unstructured, otherwise address can remain suburb/postcode only

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Address Details	Street Suffix	Records street suffixes.	100%	
Address Details	Street Type	Records the street type abbreviation.	100%	
Address Details	Suburb / Place / Locality	The full name of the general locality containing the specific address.	100%	

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Energy Consumption details	Aggregate Flag	This flag determines whether the energy at this connection point is to be treated as consumer load or as a generating unit (this may include generator auxiliary loads).	100%	
Energy Consumption details	Customer Classification Code	A code that defines the consumer class as defined in the National Energy Retail Regulations, or in overriding Jurisdictional instruments.	96% Overall	Not used by transmission business. Can be removed. The FRMP should populate this field within 5 business days of NMI creation.
Energy Consumption details	Customer Classification Threshold Code	A code that defines the consumption threshold as defined in the National Energy Retail Regulations, or in overriding Jurisdictional instruments.	96% Overall	Not used by transmission business. Can be removed.

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Data Stream Details	Averaged Daily Load	The energy delivered through a connection point or metering point over an extended period normalised to a "per day" basis (kWh).	100%	Include a date to indicate when the ADL was updated. The definition can be extended as ADL is also used as an estimate of load, where new connections are undertaken or no load history is available. This field could be used for forward estimations and validation of substitutions and high/low consumption
NMI Data Stream Details	Data Stream Type	Indicates the type of data that the Electricity Data Stream / Suffix is recording. Profile data meters are: 1. For registering sample meters used for the calculation of profile shapes where the NMI and Datastream are not used for settlements. 2. For providing external profile shapes into MDM (external PPS).	92% Overall	Only applies to market data provided streams not configuration status Is 'P' still required

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Data Stream Details	Profile Name	The Profile Name is a code that identifies the name of the algorithmically derived shape that is used to allocate a Datastream's consumption to TIs.	96% Overall	There will be further profiles required following implementation of 5 ms (eg 30 to 5ms profiles) And would want to see these profiles enumerated for consistency
NMI Data Stream Details	Stream Status Code	Code used to indicate the status of the suffix.	92% Overall	Only applies to market data provided streams not configuration status Needs validation to the Meter & Register status
NMI Data Stream Details	Suffix	Metering Datastream identifier (for MDM). Identifies the Datastream as delivered to AEMO for settlements purposes.	96% Overall	An agreed format should be used rather than either E1, 1 01,001 for intervals

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	DLF Code	Distribution Loss Factor Code. Must be a valid code in the CATS_DLF_Codes table.	96% Overall	We use this field, but all NMIs are "UNIT", could it default for transmission?
NMI Details	Embedded Network (Parent)	The embedded network identifier code is used to identify which embedded network this given NMI is the 'parent of'. (If on a NMI record this field is not populated, it is assumed the NMI is not the parent of any other NMI.)	92% Overall	Suggestion to link the child IDs to the parent ID in MSATs. Or search screen capability It may require the publication of ENM in the participant tables and the ROCL.
NMI Details	Embedded Network ID (Child)	The embedded network identifier code is used to identify which embedded network this given NMI is the 'child of'. (If on a NMI record this field is not populated, it is assumed the NMI is not the child of any other NMI.)	92% Overall	Suggestion to link the child IDs to the parent ID in MSATs. Or search screen capability It may require the publication of ENM in the participant tables and the ROCL.

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
NMI Details	Jurisdiction Code	Jurisdiction code to which the NMI belongs. This code defines the jurisdictional rules which apply to the transfer of this NMI. This value must correspond to a valid JurisdictionCode value in the Jurisdiction Codes reference table listed in section 11.	92% Overall	Identifies the regulatory regime to which the NMI belongs, the transfer rules and associated obligations applicable to the NMI.
NMI Details	NMI	NMI	100%	
NMI Details	NMI Classification Code	Code used to indicate the NMI Classification Code of this NMI.	96% Overall	Support this field being enumerated
NMI Details	Status Code	Code used to indicate the status of the NMI.	96% Overall	An additional field or code to define why the NMI is D would be useful, e.g. second character D – debt, S – Safety or V – vacant.

Topic areas where general agreement with AEMO's Analysis

No Change - Continued

- AEMO proposes no changes to the following fields

Information Category	Field Name	Field Description	Participants in Agreement with AEMO's Analysis	Other Participant Views
Participant Roles at the NMI	Participant ID	The Participant ID who is associated with the NMI in a role	100%	
Participant Roles at the NMI	Role	This defines the relationship (Role) of the Participant with the NMI	100%	

Topic areas where general agreement with AEMO's Analysis

- To Amend
  - The following fields were proposed to be amended

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter read and estimation information	Next Scheduled Read Date	Indicates the Scheduled Next Read Date for the meter if a manual Meter Reading is required.	AEMO proposes that this field be made required for all manually read meters.	96% Overall	3 of the responses agreeing with AEMO have suggested making this field mandatory instead of required
NMI Details	TNI Code	This value must correspond to a valid code in the CATS_TNI_Codes table.	Given that AEMO is proposing the addition of a physical TNI code below, AEMO proposes that the definition for this field be amended to include: "If a virtual TNI is used for this NMI, this field should use the TNI code for that virtual TNI. If only the physical TNI is used for this NMI, this field should use the TNI code for that physical TNI."	84% Overall	If a virtual TNI is allocated to a Type 7 NMI, the virtual TNI consists of a number of physical TNIs, therefore in a one NMI to many connection point relationship, this cannot be achieved. If a virtual TNI is used where load is shifted around across TNIs, then this field would be populated and the Physical TNI field may identify the predominant physical TNI the load is connected to (eg default TNI). If only a physical TNI is used, does this field need to be populated ?

Topic areas where general agreement with AEMO's Analysis

- To Remove
  - The following fields were proposed to be removed

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Asset Management Plan	If a Site plan is used, description of plan. If a sample plan is used, the name of the AEMO approved plan.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	80% Overall 100% Distribution and Metering Businesses 90% Retailers	It is unclear from the description provided just what is intended to be captured However, identification of current information could make industry processes more efficient.
Metering Installation Information	Calibration Tables	Details of any calibration factors programmed into the meter.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	100% Overall	NA

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Meter Route	The route identifier the meter is currently being read in.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Considering there's almost 70% of NMIs that has this data, this should be retained.
Metering Installation Information	Meter Test Calibration Program	Meter test & calibration program.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Field might be important for large sites in particular
Metering Installation Information	Meter Test Result Notes	A statement of compliance indicating the standard of the test regime applied at the time of the last test.	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	80% Overall	This field might be important for large sites in particular. A participant indicated that they use the field for summarising the outcome of the meter test – eg pass / fail / partial which simplifies analysis of outcomes

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering Installation Information	Test Performed By	Identifying the Metering Provider "B" and the technician responsible for conducting the last meter test. The technician is to be identified by a number unique to the Metering Provider "B".	Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO recommends the following fields be removed.	90% Overall	Field could be made MPB Test ID – and this in turn would identify in the MPB database the test, technician, results etc, this is useful to customers as it allows traceability across multiple parties to ensure retailer can advise customer that a test has or will be conducted
Meter communications information	Communications Equipment Type	Used to store baud rate for installed communication equipment in a code, calculated by dividing the baud rate by 100, of the installed communication equipment	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses indicated disconnect between the field name and its description. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	Communications Protocol	Used to provide details of access through switch units (if installed). Data to include Switch Unit, Dial Pkg, Port#, userid, password	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses did not support removal of this field as it is useful to them. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.
Meter communications information	Data Conversion	Actual Pulse Multipliers	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses indicated they were unsure of removing this field and deferred the decision to the metering area. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	Password	Read & time set passwords separated by a space.	A number of meters use dynamic passwords; hence the utility of a static "password" field is questionable. This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	96% Overall	One of the responses indicated their support of removing the field but raised a question if the field was not removed. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.
Meter communications information	Remote Phone Number	The public telephone number to contact a remote Site for metering data. Includes STD prefix and no spaces.	This field is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses did not support removal of this field as it is useful to them. Another response indicated that they do not use this field and would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter communications information	User Access Rights	Details of any End User access to the metering installation; examples include pulse outputs, interface to consumer load management system, or consumer directly accessing data in meter by special agreement.	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	89% Overall	Two responses indicated its useful for Consumer Data Right Another response indicated this will enable effective conversation with customers and timeliness of work
Meter read and estimation information	Data Validations	Description of required data validations	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses sought further information on the use of this field. Another response indicated that they would prefer to hold their comment until further discussion.

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Meter read and estimation information	Estimation Instructions	Estimation instructions	This field will be difficult to make structured, and it is currently very sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	93% Overall	One of the responses sought further information on the use of this field. Another response indicated that they would prefer to hold their comment until further discussion.
Meter read and estimation information	Measurement Type	Code based on the NMI suffix codes, indicating the type of measurements available from the meter. For example, EBQK = bidirectional energy plus reactive Interval Meter.	This field is currently sparsely populated and the data are very low quality, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	85% Overall	Those not supporting AEMO's view indicated the following, - to determine appropriateness for the end user. - use it for special cases provided it is in a structured format. - meter configuration for DER and solar works

Topic areas where general agreement with AEMO's Analysis

To Remove - Continued

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Register level information	Network Additional Information	Free text field.	This field will be difficult to make structured, and it is currently relatively sparsely populated, which indicates that participants do not find it useful. Assuming participants are comfortable with the amendment of Schedule 7.1, AEMO therefore recommends that this field be removed.	78% Overall	4 participants indicated that they populate this field and hence did not support One response indicated no support without giving any reason One reponse indicated that the field could denote the presence of devices, such as load control

Topic areas where general agreement with AEMO's Analysis

- New Field
  - The following fields were proposed to be added

Information Category	Field Name	Field Description	AEMO's Analysis	Participants in Agreement with AEMO's Analysis	Other Participant Views
Metering installation information	Meter Commission Date	Meter Commission Date	AEMO proposes not to add this newly proposed field	70% Overall	Adding this field can be useful for new retailers who wins sites that are already active, others indicated that it can be useful when discrepancies around the NMI active date, others indicated it can assist in meter deployment vs billing. Preference would be to change to 130 days