FIVE MINUTE SETTLEMENT – METERING PROCEDURE CHANGES (PACKAGE 2)

PROCEDURE CONSULTATION

FIRST STAGE PARTICIPANT RESPONSE TEMPLATE

***Participant**: United Energy*

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1. Context

This template is being provided to assist stakeholders in giving feedback about the changes detailed in the initial draft procedures associated with the 'Five-Minute Settlement Metering Procedure Changes – Package 2' consultation.

The changes being proposed focuses on supporting the implementation of:

- The Five-Minute Settlement (5MS) Rule
- The Global Settlement (GS) Rule
- Changes to the delivery, format and content contained in the meter data files sent to AEMO.

2. Metrology Procedure: Part A

Section	Description	Participant Comments
12.3, 12.4, 12.7	Provisions for non-contestable unmetered loads	Clause 12.3 (b) requires the non-contestable unmetered loads (NC-UMS) to have "Load Tables","Inventory Tables" and "On/Off Tables" that are stored within the metering data services database. It effectively prescribes the movement of all existing and future NC-UMS into the existing type 7 processing engine, it doesn't support the continued use of a single NMI/device model that currently holds the majority of these loads. It is difficult to see how an efficient and reliable new connections process can work that adds the device details itself onto the DNSPs GIS on a

Section	Description	Participant Comments
		daily or weekly basis, without generating specialist manual labour costs for the DNSP, other than requiring the REC seeking to make a UMS connection to identify the UMS customer by a “UMS Customer Code” and then the device by “UMS Device Code”, and providing the spacial location geometry, to allow automatic addition of that data to the correct Inventory table, but also to the GIS connection point. United Energy recommends that clause 12.3 (b) should allow for both single NMI per device approaches as well as single NMI to many device approaches Also a new clause, 12.3 (c) should require the customer requesting connection of a type 7 or non-contestable unmetered load to be required to provide additional information including the customers “UMS Customer Code” (evidencing pre-approval to connect a UMS) and the “UMS Device Code” which should evidence and identify the previously approved “Agreed Load” and “Profile Table” associated with the proposed customer device. (See discussion in section 14) Clauses 12.7 (a) (ii) & (iii) & (c) require the MC (or AEMO) to test that the calculated metering data for NC-UMS loads reflects the physical inventory, and to conduct the test within 15 business days and that the Physical Inventory is the prima facie evidence of the actual number. This closely replicates the current treatment of type 7 loads, and pre-disposes that the existing type 7 structure of Inventory table is present, this doesn’t easily cater for a single NMI/device method where the device

Section	Description	Participant Comments
		count is implicitly “1” and hence not maintained in an “inventory table” structure?
12.4	Removal of ‘First Tier’ references	
	General	United Energy recommends a flat line profile for non-contestable unmetered supplies due to their diverse nature and volume. Given they have been at an agreed load/day in the market to date, managing on/off times to profile all of these sites would result in hundreds if not thousands of profiles across the market and be impractical to manage. The introduction of UFE should confirm if these sites are identified as an issue in the future.

3. Metrology Procedure: Part B

Section	Description	Participant Comments
2.2, 2.5, 3.2, 3.3.6, 3.3.8, 4.2, 4.3.3, 4.3.5, 4.3.6, 5.2.1, 5.2.6, 5.3.4, 5.3.6, 6.1, 6.2.4,	Provisions for embedded network local retailers (ENLR)	

Section	Description	Participant Comments
14.2.2, 14.3		
6.1, 11.4, 12.3, 13.1.2, 13.1.3, 13.1.4, 13.2.1, 13.3.1	Provisions for non-contestable unmetered loads	Clause 6.1(c) requires the existence of an "Inventory Table" for NC-UMS connections (i.e. a type 7 style of UMS processing) and subsequently doesn't support or consider a NMI/device and ADL based process. United Energy recommends 6.1 (c) should allow for both a single NMI per device approach as well as a single NMI to many device approach. United Energy believes 13.1.2 would be enhanced by AEMO/AER publishing a NC- UMS Guideline that requires customers seeking to operate a device unmetered to register as a UMS-Customer and receive a "UMS Customer Code" and for the Customer to provide suitable inventory, load consumption and usage profile data in relation to approved devices to the DNSP to meet the requirements of 13.1.2(b). Those approved devices would then be given a "UMS Device Code" that would standardise the agreed load and load profile for that device. 13..2.1 this algorithm for calculating meter data relies on the type 7 inventory/load/on-off table processing model and doesn't account for a load profile table that includes partial or dimmed capacity other than off and on, and needs to allow for the 1 NMI / 1 Device ADL approach.

Section	Description	Participant Comments
		13.2.2 specifically requires a “separate Inventory table” for each NMI and hence doesn’t allow for the 1 NMI/1 device ADL approach. 13.2.3 On / Off Table, clauses (a) (b) and (c) do not allow for the future development of an “estimated” on-off table (load profile) for seasonal devices such as BBQs or watering sprinkler / irrigation systems that may be estimated to exist under user defined control rather than physically exist and be evidenced. 13.3 does not exclude NC-UMS and hence would then appear to make AEMO responsible for determining the annual energy consumption in accordance with 13.1.5, which would seem then to make 13.1.2 and its obligations on the DNSP in relation to NC-UMS redundant? 13.3.1 requires the Energy Calculation of NC-UMS to be calculated in accordance with an Algorithm based on the existence of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process, and doesn’t allow for the 1 NMI/1 device ADL approach. 13.2.2 does not exclude NC-UMS and hence would require the of the Load Table and Inventory Table and On/Off table – this again predisposes the use of a type 7 UMS process and doesn’t allow for the 1 NMI/1 device ADL approach.
11.1.2,	Removal of ‘First Tier’ and ‘Second Tier’	

Section	Description	Participant Comments
11.1.3, 11.2.2, 11.2.3, 11.3.1, 11.3.2, 11.3.3, 11.4, 11.5, 12.3, 12.4	references	
11.2.1	Removal of 'Local Retailer (LR)' references	
11.3.3, 11.4, 12.4, 13.2.5	Change in formulas	
11.4, 12.3	Provisions for 'bulk supply'	
12.4	Provisions for UFE (unaccounted for energy)	
10.2	Validations against a nominated maximum value.	10.2 (a) & (b) (ii) require a nominated maximum value initially set to the maximum rating of whole current meters to be used to validate the energy volume recorded in each 30 minute trading interval. This is effectively 12kWh for a single phase meter and 36kWh for a three phase meter, and results any load interval exceeding that quantity to fail validation and to result in a substitution, usually of past metering data of a lower value – this is effectively rewarding a customer who is using 'more' than they should, with a bill that charges for less than they actually used.

Section	Description	Participant Comments
		In a 30 minute interval, a single customer “may” have used 150A through the meter for 15 minutes but only 50A for the remaining 15 minutes and would hence register 12kWh and pass validation, were the customer to use 150A throughout the 30 minute interval they would physically consume an actual use of 18kWh however this exceeds the 12kWh maximum and will likely be substituted with historical data of 12kWh or less. This is a perverse signal to send to the customer who is consuming more not less than should be permitted, and it also does nothing to respond to the actual overloading of the meter, and wiring on the site. This will only get worse under 5 minute interval whereby the example above of 150A for 15 minutes and 50A for a further 15 minutes will not be hidden but will instead result in 3 consecutive 5 minute intervals exceeding the maximum rating value of 2kWh ,and again be substituted for a lower historical value. While meters are only certified to 100A for metrology purposes, recent changes to the safety requirements in Australian Metering Standards have required meters to withstand 128A for 2 hours, and hence the maximum load should be set at least at 128/130A (i.e. 18kWh for a 30 minute interval, or 3kWh for a 5 minute interval for a single phase meter and 46kWh for a 30 minute interval and 8 kWh for a 5 minute interval for a three phase meter. There is also a safety issue to the meter and the connection point, and instead of substituting the data, any load recording 130% or more of the meter rating should immediately be referred to the MC

Section	Description	Participant Comments
		for investigation.

4. Meter Data File Format (MDFF) Specification NEM12 & NEM13

Section	Description	Participant Comments
1.1	Include AEMO as a relevant party	

5. MSATS Procedures: MDM Procedures

Section	Description	Participant Comments
1.3	Inclusion of the MDM File Format and Load Process document	
3.2.11, 3.2.14, 3.2.15, 3.2.16, 9.3	Removal of 'First Tier' and 'Second Tier' references	
3.2.14, 3.2.16, 9.5, 9.6,	Inclusion of five-minute provisions	

9.7		
3.2.15, 3.2.16	Provisions for ‘bulk supply’	
3.2.15, 3.2.16, 9.2, 9.3, 9.4, 9.5, 9.6, 9.8, 9.9, 9.10	Provisions for embedded network local retailers (ENLR)	
3.2.16,	Removal of ‘Local Retailer (LR)’ references	
6.3, 6.4	Removal of aseXML csv payload tag reference	
9.5	Removal of MDM RM14 MDP Data Version Comparison report	
9.6	Removal of MDM RM15 Multiple Versions report	
9.9	Removal of MDM RM18 Electricity Interval Data report	
Appendix A	Provisions for FTP and API delivery method	

6. MSATS Procedures: MDM File Format and Load Process

Section	Description	Participant Comments
1.1, 2.2, 3.1, 3.3, 3.4, 3.5, 3.7, 3.9, 3.10, 5.2, 5.2.5, 6	Provisions for MDFF (Meter Data File Format)	
1.3	Inclusion of additional 'Related Documents'	
3.6	Changes to table content	
3.7, 3.8, 3.9, 3.12, 4.4.1	Removal of sections, including references to netting and aggregating to 30-minute	
3.8, 5.1	Changes to MDMF content	
3.11	Inclusion of file size references	
4	Inclusion of Meter data messaging exchange content	
3.1, 3.3, 3.10, 3.12, 4.2	Provisions for FTP and API delivery method	

7. MSATS Procedures: CATS Procedure Principles and Obligations

Section	Description	Participant Comments
Quick Reference Guide, 3.4, 3.7, 3.7.2, 4.2	Removal of Change Reason Code 1050, 1051, 1090, 1091, 2003, 3003, 3053, 4003, 4053, 5053, 5090, 5091, 6400, 6401	
Quick Reference Guide, 2.2, 2.6, 3.6, 4.2, 4.3, 4.15, 9.5, 12.8, 15.7, 16.7, 17.7, 18.8, 19.8, 20.7, 21.7, 22.7, 23.7, 25.9, 25.10, 27.7, 28.7, 30.7, 31.8, 32.7, 33, 34.7, 35.8, 36.9, 37.1, 37.5, 39.7	Provisions for embedded network local retailers (ENLR)	
2.9, 3.2, 4.11.2	Removal of ‘First Tier’ and ‘Second Tier’ references	
3.2, 3.4,	Removal of Local Retailer (LR) references	

4.15, 7.5, 11.4, 11.7, 11.8, 13.4, 13.6, 13.7, 25.9, 26.7, 29.7, 33		
3.7.1, 3.7.2	Changes in table references	
4.9	Addition to and modification of NMI Classification Codes	These changes introduce NCONUML for “Non-Contestable Unmetered Supplies” and also “DGENERATR”, “SGA” and “DHYBRID” for other specific customer metered connections. This utilises the classification code previously used for Small and Large, and while these preclude those being used, the market is still required to identify and manage connections differently based on that small/large criteria. There is a benefit in incorporating an S / L into the mnemonic, i.e. there is a benefit in considering the following: DHYBRDL DHYBRDS SGA- L SGA-S NCONUMS (should always be considered Small) DGENERATRL (should always be considered Large)

		AEMO has previously advised that Small Generator Aggregators will need to have the solar systems gross metered (i.e. separate to the consumption load) and on its own NMI. United Energy seeks clarification why this is not mentioned anywhere in the Metrology or NMI procedures?
4.12	Addition of 'Non-contestable Unmetered Load' Metering Installation Type Code	The NCONUML (or preferably NCONUMS - see 4.9 above) allows for separation of the contestable (type 7) metering installations and non-contestable 'Metering Installation' types, although it would have been simpler and more easily understood if these were divided into type 8 for purely 'agreed' UMS and type 9 for based on sample meters or network devices. Similarly, some ability to determine 1 NMI to many devices method (i.e. the type 7 UMS inventory table method) versus the 1 NMI/device ADL method.
4.11.2, 4.17	Provisions for UFE (unaccounted for energy)	
Various	Updated table and section references throughout the document	

8. MSATS Procedures: Procedure for the Management of Wholesale, Interconnector, Generator and Sample (WIGS) NMIs

Section	Description	Participant Comments
Quick Reference Guide, 23	Removal of Chane Reason Code 1050, 1051, 6400 and 6401	
9.7, 10.7, 11.7, 12.7, 13.7, 14.7, 15.7, 18.7, 20.7, 21.9, 22.7, 23, 25.8, 26.7, 27.1, 28.1, 28.5	Provisions for embedded network local retailers (ENLR)	
5.7, 5.8, 7.6, 7.7, 16.9, 16.10, 17.7, 19.7, 24.7	Removal of Local Retailer (LR) references	
Various	Updated table and section references throughout the document	

9. National Metering Identifier

Section	Description	Participant Comments
2.2	Updates to LR population e.g. 'GLOPOOL'	
2.2	Provisions for embedded network local retailers (ENLR)	
2.4, 7	Provisions for non-contestable unmetered loads	
7, 9.3	Removal of net data and net datastream references	
3, 7.2	Provisions for 'bulk supply'	
7, 9.3	Removal of meter data to AEMO requirements	

10. NEM RoLR Processes – Part A

Section	Description	Participant Comments
2, 4.3.2, 6.1, 11.3, 12.3	Removal of Local Retailer (LR) references	
2, 3, 6.1, 7.1, 11.2, 12, 13,	Provisions for embedded network local retailers (ENLR)	

15.1, 18.2, Appendix 1		
6.1, 12	Removal of Second Tier references	
Appendix 1	Inclusion of Average Daily Loads (ADLs) in the ROLR_013 report	

11. Service Level Procedure: Metering Data Provider Services

Section	Description	Participant Comments
1.3	Inclusion of additional related document	
2.4.1	Inclusion of 5 February 2022 reference	
2.4.1 (a) xii	Inclusion of 5 February 2022 reference	United Energy recommends that this clause be updated by removing the word 'only' to clearly articulate point D, to make a datastream inactive where the service fuse is removed (physical/local disconnection). This will allow for accurate identification of illegal use, clearly identify connection points to be included in market settlements and reduce UFE where substitute or erroneous data is being sent to the market for inactive sites.
3.7.1	References to MDM format and MDMT transaction groups	

3.10, 3.11, 3.12.2	Provisions for non-contestable unmetered loads	Clause 3.10 requires the existence of an “Inventory Table” for NC-UMS connections (i.e. a type 7 style of UMS processing) and a as a result doesn’t support or consider a NMI/Device and ADL based process. United Energy recommends Clause 3.10 should allow for both single NMI per device as well as single NMI to many devices approaches.
3.12.4	Provisions for MDPs to deliver AEMO all Datastreams related to settlements ready data and any other metering data configured in the metering installation to support UFE calculations	
3.12.4	Changes to metering data quantity and quality requirements	United Energy strongly disagrees with the proposed changes to the delivery obligations for Vic AMI meters . The proposed measurements don’t allow for issues relating to the delivery of meter data or allow for any exception management. There is an ongoing potential of meter/network communication issues, IT system issues or customer access issues that will impact participants’ ability to meet the 100% target. Any of these issues may require a nominal level of Substituted data in the market that shouldn’t be marked as quality flag of ‘F’. Additionally, with the increase of remotely read metering requirements for both quantity and quality this doesn’t consider the meter memory and possibility to obtain/recover data from meters in excess of 200 Days. This is also the case for manually read meters with the introduction

		of 99% quantity for Prelim and Final and 100% for R1 & R2 and quality at 100% for R2 does not consider current meter memory capacities of 200+ day's vs 6 months. To enable ongoing exception management United Energy recommendation is to retain current obligations.
3.12.5, 3.14.1, 3.14.2	Changes to method of delivery of data	
5.1	Changes to meter churn scenio content, including the provision for having to send associated MDFFs to AEMO as well as to participants	

12. Exemption Procedure: Metering Installation Data Storage Requirements

Section	Description	Participant Comments
New Procedure	Clause 2.1 (c)	The Victorian NEVA Order in Council modifies the NER in relation to AEMO's obligation to create and extend an Exemption procedure to Victorian AMI Meters, this should hence be recognised as a jurisdictional requirement.

13. Retail Electricity Market Glossary and Framework

Section	Description	Participant Comments
1.3	Inclusion of an addition related document	
2.2, 2.7.7	References to the Exemption Procedure: Metering Installation Data Storage Requirements	
2.6.2	Inclusion of bulk supply and/or cross boundary references	
5	Changes to terms including the addition of ENLR and UFE and modifications to first tier, second tier and FRMP related terms	

14. Other Issues Related to Consultation Subject Matter

Heading	Participant Comments
Implementing and transitioning to the changes in delivery of metering data to AEMO	
• Do the proposed changes in the applicable initial draft change-marked procedures implement the required changes in section 2.2.5 in an effective manner?	

Heading	Participant Comments
• Will the proposed transitional arrangements assist MDPs and other market participants in transitioning to the new procedural requirements?	
• Is including transitional arrangements in the relevant procedures the most effective way of implementing transitional arrangements? If not, what would be the preferred alternative approach?	
Non-contestable Unmetered Loads	
• How should non-market/contestable unmetered loads be processed and maintained in MSATS? o Should non-contestable unmetered loads with photoelectric (PE) cells be treated in a similar manner to Type 7 unmetered	

Heading	Participant Comments
loads and why? o Should non-contestable unmetered loads which do not have photoelectric (PE) cells be treated differently to those that do? If yes, how should these loads be treated?	
• What should be considered in creating and assigning non-contestable unmetered NMIs in MSATS e.g. introducing a new Metering Installation Type Code (NCONUML) and why?	
• What would be the most accurate methodology for calculating and applying a load profile to non-contestable unmetered loads and why?	
Service Levels for Meter Data	

Heading	Participant Comments
Provider Services	
• Will AEMO's proposed arrangements likely result in more accurate market settlements and why?	
• What other data quality mechanisms should AEMO consider to supporting improved accuracy in market settlements?	
Exemption Procedure: Metering Provider Data Storage Requirements	The Victorian NEVA Order in Council modifies the NER in relation to AEMO's obligation to create and extend an Exemption procedure to Victorian AMI Meters, this should hence be recognised as a jurisdictional requirement.
• Do you believe that AEMO's proposed exemption procedure clearly articulates the conditions and process for applying for a data storage exemption and why?	United Energy believes it does subject to accommodation of the requirements of the Victorian NEVA OiC in relation to the Victorian Jurisdiction being recognised as a Jurisdictional requirement.