

Table 1 – Metrology Procedure: Part A

In the first round of submissions, AEMO acknowledges that a number of comments were made about formatting issues and the need for consistency. AEMO has reviewed the procedure to correct any of these formatting issues. Again in the second of submissions, AEMO received a number of comments about formatting or typographical issues. Where appropriate, AEMO has taken these comments on board. The detailed comments about formatting or typographical errors are not included in the table below.

ITEM	RESPONDENT	CLAUSE	HEADING	PARTICIPANT COMMENT	AEMO RESPONSE
1.	Momentum Energy	0	General	Please provide clarity on the frequency of Remotely Read Interval Metering Installations – i.e. would RR meters need to be read daily? Not sure where this clause should sit appropriately (either in this document or in the SLP for MP), however Momentum strongly recommends inclusion of this clause so that appropriate system requirements can be derived.	Minimum reading requirements for market are already defined. If any participants wish to exceed this, they can do so through commercial arrangements.
2.	Endeavour Energy	0	New clause: Location with the procedure to be determined by AEMO	Procedural improvement: New obligations should be added to support clauses 11.86.7.g.3 and 11.86.7.h of the NER. Although the NER already define the required actions we believe that by explicitly defining the timing obligation it would allow for better certainty for the customer and the market. We have taken into account AEMO's response in the initial consultation and have reworded our suggestion accordingly. We suggest the following: 1. When a MC for a type 5 or 6 <i>metering installation</i> becomes aware of a <i>metering installation malfunction</i> then the MC must notify the FRMP within three business days. 2. The FRMP must appoint a <i>Metering Coordinator</i> within two <i>business days</i> of the above notification	The clauses themselves specify the requirement that these obligations be carried out “promptly”. AEMO considers that ‘promptly’ means within 1 business day. We do not believe that these provisions give AEMO any scope to provide the requested change. Ultimately, what ‘promptly’ means will be determined by a court should the AER determine that a participant has failed to meet that obligation and the participant challenges that determination.
3.	Activestream	1	Introduction	Wording such as ‘estimate’ compared with ‘forward estimation’ needs to be used correctly and consistently	The term “estimate” only occurs four times in this procedure. Three of those occur in jurisdictional material that we cannot amend unilaterally and the fourth is used correctly. While the term Estimate is used elsewhere, it is defined to mean ‘forward estimate’ and its use has been checked. Should a participant uncover an erroneous use of the term, AEMO would be more than happy to review it and correct it, should it be incorrect.
4.	AGL, Activestream	1.3	Related Documents	<ul style="list-style-type: none"> Retail Electricity Market Procedures – Glossary and Framework TBC – identify a location and add link Jurisdictional rules addition was agreed after 1st draft consult but not added 	Agreed. The document does not exist currently. Hence, it is not possible to provide a link. This heading has been amended to specify only related AEMO documents. Participants should also note that the list in the table will be alphabetised for the final published version.
5.	TasNetworks	3	Responsibility for Meter Provision	TasNetworks believes there should be a general requirement that data from remotely read meters be collected and delivered daily. Allowing data to be delivered in multi-day quantities will require higher compute power increasing costs to the customer.	AEMO considers that retailers will be able to specify their data delivery requirements when agreeing terms with providers for metering services, which may be more onerous than the requirements of the SLP.
6.	CP/PC	3.1	Overall requirements	REACTIVE ENERGY The NER Rules 7.8.1 and 7.10.5 make it clear that the MC must record, store, collect, process and deliver Reactive Energy, where required, and the AEMO procedures and SLRs should be explicit and consistent with the rules requirements in ensuring that occurs. ie An MC must ensure <i>Reactive Energy</i> is recorded, stored, collected, validated and delivered, <i>where required</i> , in accordance with clause 7.8.1 and 7.10.5 of the NER	This requirement is clear in the NER and AEMO is not replicating NER requirements in the Procedures and will only cross-refer to them where it is necessary to provide context to a procedure/process requirement.
7.	Ergon Energy	3.1	Overall requirements	Ergon Energy considers that further clarification is required is regards to the statement that: “MCs must use MPs to <u>provide</u> , install, test and maintain the relevant components...” Whilst this statement reflects existing wording, the use of “provide” often creates contention between participants, especially in High Voltage installations where supply / ownership of plant has been agreed between the DNSP and the customer as part of the connection agreement, often months / years before a FRMP is appointed and MC / RP is known. As such in those situations it is not possible for the MP to “provide” the relevant components. In addition, in some jurisdictions Low Voltage Current Transformers are supplied by the DNSP at the request of the customer and prior to the appointment of the MP. As such, Ergon Energy recommends the wording is amended to reflect a requirement that: “MCs and MPs must ensure provision is made for required components, and that components are properly selected”.	Reflects the concept of provision as used in the NER in relation to the MP's obligation for the provision, installation and maintenance of metering instalation. The suggested drafting suggests that the MC is required to make a provision in an accounting sense.
8.	Pacific Hydro	3.1	Overall requirements	Suggest the following change: Change the section heading to ‘Responsibility for Meter Provision MC and MP’	As there is no section 3.2, we have decided to delete the sub-heading, instead.

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				These are the only two roles referenced in 3.1	
9.	Power and Water Corporation - NT	3.1	Overall requirements	The Rules requires each component of the metering installation to be tested periodically, by replacing the word test to commission, may be misleading which implies that the overall error may be sufficient and there is no requirement for individual testing of each component. To ensure overall error requirements, the rules requires the algebraic sum of the error for each metering equipment. Therefore, recommend to following, MCs must ensure the components have been selected, properly installed and tested and commissioned by the MPs so that the metering installation satisfies the relevant accuracy and performance requirements in the NER and this Procedure	Agreed. AEMO will amend to avoid any misinterpretation.
10.	AGL, CP/PC	4.1	Requirement under National Measurement Act and Use of Standards	para starting unless otherwise The obligation to ensure valid (and current) pattern approval should apply to any equipment to be installed at a metering installation, not just new equipment (i.e. relocated equipment) at that time when the equipment is installed and commissioned. It would not be appropriate to use equipment which met an outdated specification in a new installation. Equipment in an installation should meet the appropriate standard when the installation is commissioned. The removal of reference to “New” CTs and “New” VTs should be reversed, as the intent of that original wording was to require new equipment to meet “current” standards, NOT to require existing equipment to meet “current” standards as it currently reads – this covers all equipment installed from market start and impacts New equipment each time the current standards are updated/replaced – it should not impact on existing in-service equipment which should be required to be meeting the standards applicable at time of installation	Agreed –rewritten to contemplate 3 situations: new, grandfathered, and curenly in service
11.	Activestream	4.1	Requirement under National Measurement Act and Use of Standards	The use of the word ‘intended’ is not relevant. The obligation should apply to any equipment installed at a connection point	Agreed
12.	Ausgrid, Endeavour Energy	4.1	Requirement under National Measurement Act and Use of Standards	Question: Why are VTs not applicable to type 4A metering installations? It appears as though types 4, 5 and 6 all have the same requirements and there are many examples of HV sites existing in the NEM with these metering installation types. Procedural improvement: For consistency the 3rd paragraph should include type 4A. We note that AEMO’s response in the initial consultation is ‘Type 4A cannot be a VT connected meter’. However given that a type 4A is a type 4 meter without communications and a type 4 can be VT connected, and customers with a low enough consumption to be a type 5 or 6 can be VT connected, it is not clear why AEMO does not believe a type 4A cannot be VT connected? Given that this paragraph places an obligation on the Australian Standards that the VT must comply with we suggest that references to meter types be removed or if they are to remain then for consistency and for completeness the type 4A should be added. If the latter is adopted then we suggest rewording to: “New VTs for type 1, 2, 3, 4, 4A, 5 and 6 <i>metering installations</i> must meet the relevant requirements ...”	S7.4.3 item 2: <i>High voltage</i> customers that require a VT and whose annual consumption is below 750 MWh, must meet the relevant accuracy requirements of Type 3 <i>metering for active energy</i> only.
13.	Activestream	4.2	Use of Optical Ports and Pulse Outputs	“90 days of interval data in 35 seconds or less” (<i>sic</i>) – needs to state it is applicable to only market data channels associated with the metering installation.	The use of the term <i>interval energy data</i> by defintion implies that it is only market data
14.	Endeavour Energy, UE	4.3	Password Allocation	Procedural improvement: The assignment of the read-only password should include the MDP because operationally the MDP would require this to perform their duty in collecting metering data. We suggest rewording clause 4.3 to: “The MP must allocate “read-only” passwords to MDPs, FRMPs, LNSPs and AEMO, except where separate “read-only” and “write” passwords are not available, in which case the MP must allocate the password to AEMO and the MDP only.” UE observes that modern metering uses sophisticated one-time passwords managed via a password management application and UE continues to believe that sharing / dispensing of passwords as implied in this clause is based on an outdated paradigm and will prove to be an increasingly impractical obligation and one that is not consistent with best practice security management. Additionally the stated requirement to supply the FRMP and LNSP is not consistent with Rules 7.15.4 (e) (2), which only requires sharing password with MC, MDP and AEMO. UE recommends aligning the procedure with the rules to reduce the possibility of passwords being stolen and misused.	The MP issues a read and write password to the MDP as per the NER. This provision is only for read-only passwords.
15.	AGL	4.4	“X” values – Calculation and use	Jurisdictional table 1. Para starting : Connection points must not be aggregated..... This section has been removed out of the 3 jurisdictional sections of the table and re-worded In the jurisdictional table the sentence reads: <i>Connection Points</i> may not be aggregated for the purposes of determining the annual consumption. As this is specifically part of the Jurisdictional material it should remain with the Jurisdictional material. 2. Second jurisdictional table : Clarification sought: ACT: 1) & 2): what is the trigger to select calculation 1) over 2)? The delta is an additional allowance of 2% - given it is the same jurisdiction was justifies the two varied approaches?	This provision is common to all jurisdictions, and so is not a jurisdictional variation. Check with ACT, as it is jurisdictional metrology material.

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				<p>3. Suggestion for easy referencing :</p> <p>Propose a simple numbering or title for each table such as the approach deployed for other tables in the same doc. E.g. Table 5.1 in section 5.2</p>	These tables do not have to be cross-referenced, so the need for numbering is not so great. We will standardise table numbering at a later stage.
16.	Endeavour Energy	4.4	"x" values – Calculation and use	<p>Procedural improvement: A new obligation should be added to manage the scenario when a metering installation breaches the x value.</p> <p>We have taken into account AEMO's response in the initial consultation. Although the NER already define the obligations for the given scenario we believe that by explicitly defining who is responsible and the timing obligation it would allow for better certainty for the customer and the market. We have also our amended our suggestion to only used defined terms.</p> <p>We suggest inserting the following obligations:</p> <ol style="list-style-type: none"> 1. When the FRMP becomes aware that a <i>connection point</i> no longer complies with clause 4.4 then the FRMP must appoint a MC within two <i>business days</i> for <i>small customers</i> or within five <i>business days</i> for <i>large customers</i> who decided not to appoint their own MC. 2. A MC who is appointed because the <i>metering installation</i> no longer complies with clause 4.4 must make the <i>metering installation</i> compliant within 10 <i>business days</i> of being appointed. 	<p>There is an existing obligation on the MC to ensure that there is an appropriate metering installation installed at each connection point. (7.3.1(a)(1))</p> <p>AEMO does not believe that it is appropriate to include these timeframes, and believes that participants have sufficient ime prior top commencement to resolve these business issues.</p>
17.	Ergon Energy	4.4	"x" values Calculation and Use	<p>In accordance with clause 7.8.3 of the National Electricity Rules (NER), which is scheduled to commence on 1 December 2017, any new and replacement metering installation for a small customer must have Type 4 metering, subject to the provisions of clause 7.8.4, which stipulates when a Type 4A metering installation is required. This has an impact on the application of clause 4.4 in draft Metrology Procedure: Part A.</p> <p>The value of 'x' in clause 4.4 is stated as the threshold for Type 5 meter installations in Queensland; that being 0MWh / annum. Effectively, this "x" value means that Type 5 meters cannot be installed in Queensland. However, while the "x" value in draft Metrology Procedure: Part A clause 4.4 refers to Type 5 installations only, S7.4.3 of the NER also refers to 'x' as the volume limit per annum per connection point for a Type 4A metering installations. As such, if the value of "x" as stipulated in the draft Metrology Procedure: Part A is applied in Queensland as currently defined, then Type 4A meters could not be installed as they would be required to have a 0MWh / annum volume of electricity flowing through the connection point.</p> <p>As such Ergon Energy notes that the Metrology Procedure: Part A will need to be updated to reflect the jurisdictional thresholds as they are determined by relevant Ministers.</p>	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
18.	AGL	4.5	"y" values – Calculation and use	<p>Interchanged calculation and estimation</p> <ol style="list-style-type: none"> 1. Para starting: Connection points must not be aggregated when calculating 'y'. <p>This section has been removed out of the 2 jurisdictional sections of the table and re-worded</p> <p>In the jurisdictional table the sentence reads:</p> <p><i>Connection Points</i> may not be aggregated for the purposes of determining the annual consumption.</p> <p>Therefore this sentence should remain with the jurisdictional material.</p> <p>Feedback for Jurisdictional tables:</p> <p>Also, ACT the original sentence of the paragraph and the start of point 3) does not flow. Suggest changing in 3) the word <i>calculated</i> to calculations; else rewording the first sentence of the paragraph to suit all points</p> <ol style="list-style-type: none"> 1. Consistent and Differential use of calculated vs estimated. <p>Using an engineering report one assumes the annual consumption will be calculated.</p>	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
19.	Endeavour Energy	4.5	"y" values – Calculation and use	<p>Procedural improvement: For consistency this clause should have similar wording as clause 4.4.</p> <p>We suggest rewording clause 4.5 to: "<i>Connection points</i> must not be aggregated when determining the annual consumption or the ADL as the basis of the comparison with the volume threshold for "y"."</p>	Agreed.
20.	Endeavour Energy	4.5	"y" values – Calculation and use	<p>Procedural improvement: A new obligation should be added to manage the scenario when a metering installation breaches the y value.</p> <p>We have taken into account AEMO's response in the initial consultation. Although the NER already define the obligations for the given scenario we believe that by explicitly defining who is responsible and the timing obligation it would allow for better certainty for the customer and the market. We have also our amended our suggestion to only used defined terms.</p> <p>We suggest inserting the following obligations:</p> <ol style="list-style-type: none"> 1. When the FRMP becomes aware that a <i>connection point</i> no longer complies with clause 4.5 then the FRMP must appoint a MC within two <i>business days</i> for <i>small customers</i> or within five <i>business days</i> for <i>large customers</i> who decided not to appoint their own MC. 2. A MC who is appointed because the <i>metering installation</i> no longer complies with clause 4.5 must make the <i>metering installation</i> compliant within 10 <i>business days</i> of being appointed. 	<p>There is an existing obligation on the MC to ensure that there is an appropriate metering installation installed at each connection point. (7.3.1(a)(1))</p> <p>AEMO does not believe that it is appropriate to include these timeframes, and believes that participants have sufficient time prior top commencement to resolve these business issues.</p>
21.	Ergon Energy	4.5	"y" values Calculation and Use	<p>Following on from the above comments in regards to 4.4, Ergon Energy seeks confirmation from AEMO on the appropriate treatment of Large Queensland Non-Market Customers >100MWh to <750MWh. Specifically, there does not appear to be</p>	Queensland jurisdiction is reviewing this provision.

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				an obligation on Ergon Energy to install new and replacement meters as Type 4 in line with NER 7.8.3, unless consumption moves >750MWh or <100MWh.	
22.	Activestream	4.6	Grandfathering	Active Stream believe that this section should read as follows: “requirements of a relevant Jurisdiction”. Otherwise one could potentially say that one has met the requirements even though they are not the requirements for that jurisdiction.	Headings are merely markers of content. Substantive material will be found in the content of each section.
23.	AGL, Jemena, Pacific Hydro, UE, EA	4.6	Grandfathering	AGL suggest that VICAMI meters be covered by this clause Jemena believe that there should be no “VICAMI”, references in the procedure documentation—instead there should be a grandfathering clause under this section that allows the existing Victorian AMI meters installed under 9.9C of the NER to continue in their current classification of MRIM / RWD, and continue using the Type 5. PacHydro suggest VICAMI meters be ‘grandfathered’ as of 1 December 2017 given they are currently identifiable in MSATS and that post 1 December 2017 any VICAMI meters must be exchanged for an advanced meter. UE previously suggested that there be a change to this clause that allows for grandfathering of the Victorian AMI metering. We have discussed our view regarding VICAMI at length in our general introduction (G2), and again we recommend that this clause be amended to ensure proper grandfathering of the Victorian AMI meter fleet. This is no different to the treatment of meters or transformers that were installed under a previous standard which are grandfathered.	AEMO does not have the power to include or introduce a new metering installation type in the Metrology Procedure. Note that allowance has been made in MSATS and Metrology Procedure Part B to accommodate these meters.
24.	VectorAMS	4.7	Data Storage Requirements for Meters	If there is a data storage requirement for Type 4A then it should also apply to Type 4 as any Type 4 metering installation could become Type 4A at some point in time and vice versa given changes to telecommunications network coverage as networks evolve and change. Customer opt-out conditions may also change over time. This goes for any requirement of a Type 4A installation which would be required at install time, given that the MP may not know at that point if the installation will be Type 4 or 4A.	These capabilities are prescribed in the NER 7.8.2 (a) (9) and (10). As the first sentence merely replicates 7.8.2(a)(9), it has been deleted. The section now only deals with certain aspects of type 5 requirements and is explicitly stated as being a supplement to 7.8.9(a)(10).
25.	CP/PC	4.10	Alarm Meters	Schedule 7.5 specifically lists a set of alarms yet these are not addressed at all in clause 4.10? events that have been recorded in <i>meter</i> log (or logs) including recorded information in the tamper detection alarm, reverse energy flow alarm and <i>metering</i> device temperature alarm. Is it intended that an MC and MP will ONLY take notice of these alarms if they are paid to do so by a Participant? – Which Participant does AEMO expect will be responsible for requesting and acting on these alarms?	The alarms listed in the minimum services specification (S7.5) are event alarms, and do not relate to metrology. These can be collected/reported by commercial arrangement. The alarms in section 4.10 are related to quality, timeliness of data and related to Metrology.
26.	Power and Water Corporation – NT	4.10	Alarm Meters	The voltage variation is in accordance to Jurisdictional requirements. Although, the - 15% is the acceptable level, recommend, the generalise statement in event of the jurisdictional changes. Recommend the following: (e.g. for contestable customer supplies a Voltage variation required under the jurisdictional requirements of $\pm 15\%$).	This is meant as an illustrative example, and is not based on Jurisdictional requirements.
27.	Origin Energy, UE, PacHydro, AusNet, AGL, Lumo/Red, Activestream	4.10	Alarm Settings	4.10. Alarm settings Where the <i>meter</i> supports alarm functionality as an attachment to the interval metering data, the MP is required to enable the following alarms: (a) Power failure; (b) Voltage failure; (c) Pulse or interval data overflow; (d) Checksum error; and (e) Time reset. Where there are alarm sensitivity settings, these must be set at appropriate levels to ensure meaningful alarm outputs (e.g. for contestable customer supplies a Voltage drop of -15% is nominally appropriate). Alarms and alarm settings appear in multiple documents but reference different alarms – there needs to be an agreed set of alarms that is consistent across procedures	Agreed The alarms have been renamed to be consistent with Metrology Procedure Part B: (i) power failure/ <i>meter</i> loss of supply for instrument transformer connected <i>metering installations</i> only; (ii) VT or phase failure; (iii) pulse overflow; (iv) cyclic redundancy check error; and (v) time tolerance.
28.	Momentum Energy	5	Minimum Services Specification	For a type 4 metering installation to become a small customer metering installation, it must meet the minimum services specification, which is specified in Schedule 7.5 of the NER. The services set out in the minimum services specification apply to the capability of the metering installation itself. The above clause has a dependency on “reversion” process which is jurisdiction specific. However the above clause may also hold true to a type 4A to a small customer metering installation.	The jurisdictions specific reversion provisions in NER 7.3.2(e)(6) relate only to the reversion from using interval data to using accumulation data.

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29.	CP/PC	5.1	Minimum Service Levels	"Completion time frames" based purely on the capability of the metering installation equipment itself and not the end to end communications and Processing system remains a poor and questionable outcome – while the Rule only prescribes the minimum services at the "metering installation" that is the starting point of the capability, it doesn't appear limit AEMO's ability to define Minimum Service Levels on an end to end basis, otherwise minimum service levels for the delivery of real and reactive energy could be similarly "limited to the metering installation itself"	This is what is required by the NER. The NER merely requires that we specify the services provided by the metering installation – the end-to-end process is more properly dealt with in a commercial agreement between the relevant parties.
30.	Endeavour Energy	5.1.2	Minimum Service Levels	Procedural improvement: Clause 5.1.2 contains two paragraphs that state the same thing with different wordings. We suggest deleting one of the paragraphs.	Agreed
31.	AGL	5.2	Technical Requirements	AGL queries this obligation in light of the large number of type 5 and 6 meters that will be in service post 1 Dec 2017. AGL assumes that this is for the installation of type 4 meters, not the existing small customer meters which will be in service as of that date.	This provision clearly applies to <i>small customer metering installations</i> , as defined in the NER.
32.	AGL	5.2(a)	Technical Requirements	A note: Acronyms for UOM (units of measurement) should be kept consistent throughout documents. E.g. VARh is used in the MDFF specs and in the 1.1.1 measures and abbreviations – AEMO www.aemo.com.au/Electricity/Planning/Archive-of.../~/.../2012NTNDPGlossary Suggest varh is replaced with VARh. Or at least the use of UOMs aligned throughout the procedures.	varh is the correct SI unit
33.	AGL	5.2(b)	Technical Requirements	Please review and reword as syntactically the clause is very awkward to understand. Suggested: Where a poly-phase <i>metering</i> device is installed, the <i>metering installation</i> must (for each and all connected phases) be capable of recording and providing the average voltage and current, over the nominated TI or TIs. Spaces to separate 'nominated TIs' is required towards the end of the clause.	Provision has been edited for readability
34.	AGL	7	Embedded Networks	Some clarification /feedback from jurisdictional tables. Table ACT It is unclear what the requirements are for the metering installation in clause (1) are versus the metering installation in clause Noting this is a jurisdictional requirement, AGL is unsure how a selection of options 1 or 2 would be made.	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
35.	AGL	7	Embedded Networks	Table NSW Is it possible for an Embedded Network Parent to have an accumulation meter in the new environment? AGL assumes that an existing meter would remain. Also – what jurisdictional document is referenced by clause 2.5.1[NSW](1)(b) above	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
36.	AGL	7	Embedded Networks	ACT Clause (1) and (2) are contradictory	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
37.	Power and Water Corporation – NT	7	Embedded Networks	The acronyms MC has been used earlier in the document and this has been changed to Metering Coordinator under the variation table. Recommend to continue with MC in the whole of the document rather than changing it half way.	These provisions are Jurisdictional Metrology Material, and can only be altered by a request from the COAG-EC.
38.	Activestream	7	Embedded Networks	Active Stream understands from AEMO's response from Stage 1: Jurisdictional matters are being reviewed by jurisdictions and DOIIR in consultation with participants. What is the estimated response date?	This is still being considered by Jurisdictions.
39.	AGL	8	Reversion of Metering Installation Types	General comment regarding MC obligation in table – it's unclear if the obligations apply to the existing or new MC?	The MC that has responsibility for the metering installation.
40.	Activestream	8	Reversion of Metering Installation Types	NSW – what are these clauses being referred to? ACT – what if type 2 or 3 is installed, can relevant parties comply with type 4 rules?	The NSW references are being updated for the final Procedure. The concept of "reversion" is based on NER (7.3.2(e)(6)): "The MC must ensure that no device that is capable of producing interval energy data and is already installed in a metering installation is replaced with a device that only produces accumulated energy data unless the metrology procedure permits the replacement to take place."

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41.	AGL	9	Routine Testing and Inspection of Metering Installations	Para starting ‘Once AEMO approves ...’ The MC should also provide the Testing Strategy to the financially affected parties – FRMP, LNSP, LR (as they may be customer appointed). There will be instances where one or more parties will not have a contract agreement with the MC but are affected by MC actions. As parties affected by these actions they should be able to assure themselves that appropriate steps are been undertaken.	This can be arranged on a commercial basis. The procedure only reflects the obligations in the NER, which is the minimum set of parties entitled to receive the Testing Strategy.
42.	Power and Water Corporation – NT	9	Routine Testing and Inspection of Metering Installations	Not all metering installations have VTs, therefore a = error of VT and wiring (For HV installation)	This is intuitive – if there is no VT, there is no error to add to the calculation.
43.	TasNetworks, AGL	10	Routine Testing and Inspection of Metering Installations	DNSP may need access to meter terminals to conduct safety tests. Section 9 or 10 should provide DNSP with rights to access the terminals & reseal without obtaining ‘permission’ ie the reverse of 12.1.3 If the meter is installed before the service is installed, then it may be necessary for the DB to access the meter terminals for various tests. DBs need the ability to access meter terminals for safety reasons as needed and would then re-seal the meter terminals. See clause 12.1.3 (c) where MC can access the Network device. There needs to be a consistent approach to these outcomes. AGL also sees no reason why each party needs notification.	One of the obligations placed on the MC by the NER is to provide access to metering installations to relevant parties, and so that is a matter that each DNSP can resolve by agreement with each MC operating within their networks.
44.	Ausgrid, Ergon Energy	10	Installation of Meter(s)	Paragraph 2: Ausgrid suggests that either Type 4 is removed or Type 1-3 is included. Why does a Type 4 need to be readily accessed for meter reading when a Type 1-3 has the same obligations? The MC must ensure that when each meter of a type 4 or 4A metering installation is installed, it is checked such that it has the optical port, communications port and visual display located so that the optical port, communications port, or visual display can be readily accessed for Meter Reading. However, this requirement only applies to a Jurisdiction as specified in the following table: Jurisdiction Variation in accordance with Jurisdictional policy Queensland Complies with the Queensland Electricity Connection and Metering Manual, which each LNSP must publish and update from time to time. It is also a requirement that a MC in Queensland ensure that when each meter of a Type other than a Type 4 or 4A is installed, it complies with the Queensland Electricity Connection and Metering Manual, which each LNSP must publish and update from time to time.	Section 10 has been restructured to provide more clarity, and removed the requirement for testing of optical port on type 4 meters.
45.	AusNet Services	10	Installation of Meter(s)	AusNet Services suggests of a paragraph is added that enables the LNSP, where required to establish a connection or alter a connection, to remove seals and access the terminals to effect testing and safe energisation of the site, and provide details of the replacement seals to the MC. This is important because the LNSP has the obligations under chapter 5A of the Rules to establish a connection or alter a connection, except in NSW where the ASP performs these activities on behalf of the LSNPs.	Seals are covered in 7.15.2 (c), (d) & (e) of the NER. AEMO considers that the protocols over the requirement by LNSPs to access metering installations, break seals and the like be covered in commercial arrangements with each MC operating within their networks.
46.	AusNet Services	10	Installation of Meter(s)	“Where a <i>Market Participant</i> or LNSP requests in writing for the MC to provide and install a <i>metering installation</i> , the MC must use <i>reasonable endeavours</i> to provide and install the <i>metering installation</i> within 20 <i>business days</i> of receipt of the written request.” Previously AusNet Services made a submission in relation to the above part of clause 10 stating that the turnaround time of 20 days is too long, and this aspect of the meter installation process has been inadequately considered in the drafting of this clause. We suggested it it should be redrafted to better reflect the coordinated approach between the physical connection and the meter installation with the Metering Contestability. However, AEMO response was this is an existing provision, and will be reviewed at a later date in the BAU review process. We consider not addressing this issue would result in unacceptable delays in coordinating new connections. In Victoria, businesses have 10 business days to arrange such basic connection services. Allowing a metering service provider to delay this by 20 business days, on 1 December 2017, would result in an unpalatable outcome for customers. For directly connected connections (that is sites with no CT) the meter must be connected before the necessary safety tests can be performed. Chapter 5A allocates the responsibility of providing the connection services to the DNSP at the request of the customer or customer’s agent. Hence we consider leaving this to a BAU review process is unacceptable and that it is imperative to make the below change. “Where a Market Participant or LNSP requests in writing for the MC to provide and install a metering installation, the MC must use reasonable endeavours to provide and install the metering installation within 10 business days of receipt of the written request and coordinate the meter installation with the LNSP . Note, an exception to this requirement is where high voltage equipment procurement with long lead times is required.”	This provision has been removed.. These timeframes should be arranged through commercial agreements.
47.	UE	10	Installation of Meter(s)	UE believes this clause does not adequately acknowledge the necessary involvement of the LNSP in some installations. There should be some enhancement to allow for a level of operational flexibility in the field when the meter installation also	In the new Rules, the MC is the person responsible for controlling access to, and security of, the metering installation

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				<p>requires the installation / upgrade of a service that must be undertaken by the LNSP. In particular flexibility to access meter terminals and remove and replace meter terminal seals may be applicable in some circumstances in order to ensure the ability to test and ensure safe energisation of a site.</p> <p>We note that draft clause 12.1.3 (c)) allows an MC to remove the seals of an LNSP’s network device where needed. We believe a similar flexibility should be afforded to an LNSP to access and remove meter terminal seals if needed for safe energisation.</p> <p>UE suggest insertion of a paragraph along these lines: <i>Where an LNSP is required to install or upgrade a service, and the metering installation has already been installed for that site, the LNSP may remove seals and access the Meter terminals to effect testing and safe energisation of the site, and provide details of the replacement seals to the MC.</i></p>	(NER 7.3.1 (a)(3)) See also AEMO’s response to item 45.								
48.	Ergon Energy	10	Installation of Meters(s)	<p>Ergon Energy is concerned that the current drafting of clause 10 is unclear. A literal reading of this clause would indicate that that this requirement only applies to Queensland (being the jurisdiction specified in the table). However, Ergon Energy does not consider this is the intent.</p> <p>Upon review of the identical requirement for Type 5 and 6 meters, specified in the current version of the Metrology Procedure: Part A, it appears to Ergon Energy that the intent in the new draft may be that for all jurisdictions other than Queensland, the requirement is as specified in subclause (d); and for Queensland, the requirement is that the MC must ensure that when each meter of a Type 4 or 4A meter is installed, it is checked such that it complies with the relevant Electricity Connection and Metering Manual (ECMM), which each Local Network Service Provider (LNSP) must publish and update from time to time.</p> <p>If it is in fact the intent that an MC in Queensland must ensure that when each meter of a Type 4 or 4A meter is installed, it is checked such that it complies with the relevant ECMM, Ergon Energy suggests that clause 10 be amended, to make this clear. Further, as the Queensland ECMM applies to all meters in Queensland, Ergon Energy recommends this requirement in clause 10 for compliance with the ECMM extend beyond Type 4 and 4A meters, to include all meters. We consider the following drafting would clarify the intent of clause 10 and would also ensure that all meters installed in Queensland would be required to comply with the relevant ECMM:</p>	Only subclause (e) applies to Queensland. This section has been restructured for the sake of clarity.								
49.	Momentum Energy, Lumo/Red, Endeavour, AGL, AAD, Activestream	10.1	Installation by ASPs	<p>10.1. Installation by Accredited Service Providers</p> <p>This requirement only applies to the Jurisdiction specified in the following table:</p> <table><tr><th>Jurisdiction</th><th>Variation in accordance with Jurisdictional policy</th></tr><tr><td>New South Wales</td><td></td></tr></table> <table><tr><th>Jurisdiction</th><th>Variation in accordance with jurisdictional policy</th></tr><tr><td>New South Wales</td><td>The MC must ensure that, where another person engages an MP for the purposes of installing a meter or data logger, the meter or data logger is provided to that MP by the MP engaged for the purposes of providing the meter or data logger.</td></tr></table> <p>The first line isn’t necessary, considering the table has been striked off.</p>	Jurisdiction	Variation in accordance with Jurisdictional policy	New South Wales		Jurisdiction	Variation in accordance with jurisdictional policy	New South Wales	The MC must ensure that, where another person engages an MP for the purposes of installing a meter or data logger, the meter or data logger is provided to that MP by the MP engaged for the purposes of providing the meter or data logger.	Agreed. In fact, the heading is redundant, as well.
Jurisdiction	Variation in accordance with Jurisdictional policy												
New South Wales													
Jurisdiction	Variation in accordance with jurisdictional policy												
New South Wales	The MC must ensure that, where another person engages an MP for the purposes of installing a meter or data logger, the meter or data logger is provided to that MP by the MP engaged for the purposes of providing the meter or data logger.												
50.	Endeavour Energy	11.1	Initiation of a Meter Churn	<p>We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO’s draft determination. We have repeated our comments again.</p> <p>The current clause suggests that only the Current MC can initiate a meter churn. This should include the New MC so that the meter can change first and then later the MC can become the Current MC with an effective start date that aligns with the meter change date. Take into consideration a type 6 to type 4 meter change scenario. The Current MC who is the LNSP would not be initiating the meter change to a type 4, it would be the New MC who would do this.</p> <p>Procedural improvement: a New MC can also initiate meter churn. We suggest rewording clause 11.1 to ‘The Current MC or the New MC for a <i>metering installation</i> can initiate a Meter Churn’</p>	Clause 7.8.9(e) of the NER states: <i>A Metering Coordinator</i> must not arrange the alteration or replacement of a <i>metering installation</i> ... until the transfer of the relevant <i>market load</i> has been effected by <i>AEMO</i> in accordance with the ... [MSATS] <i>Procedures</i> . This suggests that, on a change of retailer, the New MC cannot initiate a Meter Churn. If the MC will not change, there is no issue. If there is only a change in MC, AEMO considers it to be more logical for the New MC to wait until it becomes the Current MC before initiating the Meter Churn.								
51.	Endeavour Energy	11.2	Performance of a Meter Churn	<p>We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO’s draft determination. We have repeated our comments again.</p> <p>The current clause suggests that a MP with the appropriate accreditation can perform a meter churn. However it is not any MP with the appropriate accreditation, it is only the Current or New MP with the appropriate accreditation that can perform a meter churn.</p> <p>Procedural improvement: Clause 11.2 is ambiguous. We suggest rewording to ‘The Current MPB or the New MPB with the appropriate accreditation can perform a Meter Churn’</p>	The reference to a new or current MP is not relevant as they will not be acting of their own volition – this is just a generic requirement about which MPs can actually perform the Meter Churn.								
52.	AAD, Ausgrid	11.3	Meter Churn Process	<p>Need to add since it is mandatory, both FRMP and MC should take responsibility to ensure MP provided information;</p> <p>(viii) Network Tariff Code and Retailer tariff configuration12.1</p> <p>Ausgrid contends all this information should be available to the new MPB from MSATS via the C7 Report.</p>	To the extent that the procedure needs to deal with this matter, it does so in section 11.3(a)(vii). If such information is required to perform the task requested, it is reasonable to consider that the parties involved are suitably incentivised to ensure that it is sent from DNSP to FRMP, from FRMP to MC, and so on.								

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					Reporting, including C7 reports is not a matter for consultation at this time, however if such reporting is made available, AEMO notes that the current arrangements, including the network tariff code and retailer tariff, at a metering installation may require amendment when a metering installation is changed.
53.	AGL	11.3(b)	Meter Churn Process	Obligation that MC must ensure that the roles are aligned within 2 days of the meter churn change. MC may not be aware of other role changes initiated by other parties and therefore may not be able to ensure all role assignments are made I.e. MC of a NMI (Child) will they be notified of role changes?	It is the MC's role to ensure that they have arrangements in place to meet their obligations. AEMO has not been able to identify a situation where an MC would not be able to ensure this requirement is met.
54.	Endeavour Energy	11.3	Meter Churn Process	We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO's draft determination. We have repeated our comments again. The term New MP is not defined but the term New MPB is defined. Procedural improvement: Clause 11.3.a should use defined terms to avoid confusion. We suggest rewording to 'information is made available to any New MPB to facilitate the Meter Churn, which includes.'	Agreed.
55.	Endeavour Energy	11.3	Meter Churn Process	We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO's draft determination. We have repeated our comments again. The term Site refers to a physical location. We believe that the intent was to provide the address of the Site. Given the changes in the glossary terms in the draft determination we have reworded our suggestion accordingly. Procedural improvement: Clause 11.3.a.ii suggests that the MC provides to the New MPB the Site which is impossible. We suggest that this be reworded to 'the address of the Site;'	Section 11.3(a)(ii) does not suggest that the MC provides the Site to the MPB. If you read the entire provision, you will note that it states that the MC must ensure that certain information is available to the MPB, one of which is the Site. Nevertheless, we have added the word 'address' to the sub-paragraph.
56.	Endeavour Energy	11.3	Meter Churn Process	We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO's draft determination. We have repeated our comments again. The term Metering Installation Type is not defined but the term Metering Installation Type Code is defined. Procedural improvement: Clause 11.3.a.vi should use defined terms to avoid confusion. We suggest rewording to 'the current Metering Installation Type Code; and'	The current provision is adequate to provide an unambiguous identifier for the metering installation, ie one could use type 4 or COMMS4 to identify that a type 4 metering installation is in use. We did not intend to refer to the MSATS code, which is why we drafted it as: 'the current <i>metering installation</i> type'.
57.	Lumo/Red	11.3	Meter Churn Process	When a Meter Churn is initiated, the MC must ensure: (c) the start date for any New MP or New MDP is: (iii) for Jurisdictions where reversion is permitted, the <i>meter</i> change date +1 day for an Interval Meter to Accumulation Meter change. Red and Lumo recommend this be removed as there will be no reversion applicable from 1 December 2017.	Agreed (although the NER still has the "reversion" provision (7.3.2(e)(6))
58.	Endeavour Energy	11.3	Meter Churn Process	We submitted the below comments in the initial consultation, however this comment is not in Appendix A of AEMO's draft determination. We have repeated our comments again. The term New MP is not defined but the term New MPB is defined. Procedural improvement: Clause 11.3.c should use defined terms to avoid confusion. We suggest rewording to 'the start date for any New MPB or New MDP is:'	Agreed.
59.	Activestream	11.3	Meter Churn Process	More information should be provided e.g. Meter type – WC/LVCT, number of phases, number of elements 1E, 2E or 3E. AEMO response from Stage 1: 'Current list is sufficient', however Active Stream disagree with this	The list is not intended to be exhaustive, but rather provides a minimum set. If Active Stream wants more information from their MCs, they should provide for it in their commercial arrangements with them.

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60.	AGL, AusNet Services, Metropolis Metering, CP/PC, Endeavour Energy, Ergon Energy VectorAMS AAD, Ausgrid Ausgrid	12 12.1 12.1.1 12.1.2	De-Commissioning and Removal of Metering Equipment and Network Devices Network Devices Deemed Network Devices Removal during Meter Churn	<p>New para added</p> <p>It's not clear what the outcome of a use of system agreement has on the metrology procedure.</p> <p>Does the UoS now take precedence and does this mean the MP cannot potentially remove the network device ?</p> <p>"Where the metering installation includes equipment for load control or the measurement of reactive energy, the installation and operation of that equipment will be governed by an instrument other than the metrology procedure, for example, a 'use of system' agreement between the LNSP and the FRMP."</p> <p>AusNet Service strongly recommends removing the above words on the basis that NER clearly allows load control and reactive power measurement by the LNSP so there is no requirement for a separate agreement.</p> <p>12(b) It is unclear how a 'use of system' agreement between the LNSP and the FRMP can govern the "installation and operation of ...equipment", where the equipment is owned and operated by neither the LNSP or FRMP. While the purpose clearly indicates that Metrology does not cover reactive energy or controlled load, the example doesn't make sense, given metering installed under these rules will have to be contestable.</p>	<p>There have been several comments from participants relating to the drafting of this section. The theme of these submissions has been that the concept has been correctly captured, but the drafting is inadequate.</p> <p>AEMO has reviewed the submissions, and largely agrees with the suggestions. As a result, sections 12.1, 12.1.1, and 12.1.2 have been deleted, and replaced by a new section 12.2</p> <p>AEMO has redrafted sections 12.1 & 12.2.1.</p>
				This clause, and the subsequent associated clauses of 12.1.2, 12.1.3 and 12.1.4 have no reference to the explicit "Network Device" requirements listed in clause 7.8.6 of the NER	
				<p>Procedural improvement: Clause 12.b should be worded similar to clause 3.2 in the Service Level Procedure (MP). Note that we have suggested rewording for clause 3.2 in the Service Level Procedure (MP).</p> <p>We have taken into account AEMO's response in the initial consultation and wish to provide more justification.</p> <p>Although the current clause does not restrict parties from agreeing to not return the equipment, it does define the default arrangement which is to return the equipment. AEMO also stated that there are appropriate incentives on all parties to ensure an efficient process for return and disposal is agreed. However in the absence of an agreement the default defined by AEMO is to return the equipment. This means that by default the owner of the asset bears the responsibility and cost for the disposal. Moving forward there will be a large volume of type 5 and 6 metering equipment that will be removed which are not economical to refurbish and would require disposal. We believe that the party who removed the equipment should be responsible for the disposal if the asset owner does not want the equipment returned. This is to ensure that disposal costs are not cross subsidised by customers who have exercised their choice to not have smart meters.</p> <p>By defining explicit obligation on the disposal, as opposed to relying on agreements, we believe that this would deliver better outcomes for customers.</p> <p>We suggest rewording clause 12.b to:</p> <p>'The ownership of the existing <i>meter</i> and <i>network device</i> is ascertained and arrangements made to:</p> <p>i) Return the <i>meter</i> and <i>network device</i> to its owner within 10 <i>business days</i> of the removal if the owner wants the asset back, or</p> <p>Dispose the removed <i>meter</i> and <i>network device</i> if the owner does not want the asset back.'</p>	
				<p>We submitted the below comments in the initial consultation, however we note that AEMO did not respond to the comment. We have repeated our comments again.</p> <p>There should be no reason why the MP who removes a type 6 meter cannot obtain and provide the final reading to the Current MDP. By placing an obligation on the asset owner to obtain the final reading for a type 6 meter it transfers the obligation from the MP who removed the meter to the asset owner as the default responsible party. We suggest that to remove any doubt and avoid encouraging inefficient operational practices the obligation for obtaining the final reading of a type 6 meter be defined as only the MP who removed the meter.</p> <p>Procedural improvement: The MP removing a type 6 meter should be responsible for obtaining the final meter read and providing to the Current MDP. We suggest rewording the last paragraph to:</p> <p>'Where Actual Meter Reading from a removed meter is not transferred to the Current MDP at the time of de-commissioning then</p> <p>i) The MP who removed the meter must provide the Actual Meter Reading to the Current MDP within two <i>business days</i> of the meter removal if the removed meter was a type 6</p> <p>ii) The MP who removed the meter must make arrangements with the Current MDP to obtain the Actual Meter Reading within 20 <i>business days</i> of the meter removal if the removed meter was a type 1, 2, 3, 4, 4A or 5.'</p>	
				<p>Procedural improvement: The last paragraph was added in the draft determination. However it looks out of place. This section is about de-commissioning and removal while the last paragraph is about installing and operation of equipment. We suggest that this last paragraph be deleted from this section.</p>	

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				<p>Clarity needs to be provided to ensure the incoming MP has accountability for the final reads.</p> <p>It is not reasonable for there to be an obligation on the MP undertaking the work to ensure a final reading is taken for Type 5 metering installation. The obligation should be on the MP undertaking the work to return the meter, and on the current MP to undertake the final reading from the returned meter.</p> <p>Vector AMS is comfortable with an obligation to provide final reads for Type 6 accumulation meters.</p> <p>12.1.2. remove the s (b) where the sole purpose of a network device is to provides a:</p> <p>Clause 12.1.1: Question. So, a device supporting a controlled load tariff is not deemed to be a Network Device. Correct? Clause 12.1.2 (b) (i): Replace “relays” with equipment to cater for other devices used to support</p> <p>“12.1.2. Removal during Meter Churn A network device can only be removed during a Meter Churn: (a) where the relevant MC and the LNSP agree to its removal; or (b) where the network device provides a: (i) control service that facilitates the application of a Network Tariff at the NMI, such as the control of a hot water, and that service is obsolete as a result of the Meter Churn; or (ii) switching service that facilitates the application of a Network Tariff at the NMI, such as a timeclock or time switch used to change the register on a multi-register meter, and that service is obsolete as a result of the Meter Churn.”</p> <p>Re 12.1.2 in the previous submission AusNet Services suggested removing (i) and (ii). In response AEMO did not want to reinterpret or restate the Rules. However, we consider allowing for the unconditional removal of a network device when the device facilitates the application of a Network Tariff is reinterpreting the Rules. Network devices could be providing for more advanced services, including randomisation of switching times.</p> <p>Networks would benefit from the removal of redundant devices cleaning up the meter boards. Offcourse in line with jurisdictional safety requirement the MPB would have fill any hole in the meter board large enough for finger. In absensents of these obligations negotiated arrangements would likely prevail.</p> <p>If AEMO will not reinterpret the Rules and these provision remain. Then these provisions must be very clear in stating that it only applies for the removal of obsolete time switches and control devices that switch the load at fixed times and only where the function performed by the device are performed by the meter. This is appropriate because controlled load switching is not prescribed in minimum services specification.</p> <p>“12.1.3. LNSP Obligations if Alterations to Metering Installations Required Where an LNSP considers that an alteration is required to a metering installation to accommodate, remove, or replace a network device installed at or near the metering installation, including the removal of any seal, the LNSP must: (a) agree the alterations with the affected MC and MP prior to the commencement of any alterations;”</p> <p>Re 12.1.3 in the previous submission AusNet Services considers that the requirement on the LNSP with respect to alterations to the metering installation with respect to network device should be no more stringent than the situation of a MP removing a network device.</p> <p>Although the responsibility of the metering installation resides with the MC, the LNSP has the responsibility of the network device. Both the LNSP and the MC would have suitably qualified staff to alter the metering installation to install or remove a network device. Given the only alternative to a network device is the LNSP negotiating with the MC, it is anti-competitive for the Metrology Procedures to require the LNSP to have an agreement with the MC before installing a network device.</p> <p>Further, the Rules already prevent the LNSP from “adversely impacting on the operation of the metering installation”. Hence, we strongly recommend changing the obligation to a more fair and balanced obligation of “(a) to make reasonable endeavours to advise and negotiate with the affected MC prior to the commencement of any alterations.”</p> <p>12.1.1 Deemed Network Devices This clause does not comply with the definition of a <i>network device</i> to be included in the new Chapter 10 of the National Electricity Rules (NER), as shown below. network device Apparatus or equipment that: (a) enables a <i>Local Network Service Provider</i> (LNSP) to monitor, operate or control the <i>network</i> for the purposes of providing <i>network services</i>, which may include switching devices, measurement equipment and control equipment; and (b) is located at or adjacent to a <i>metering installation</i> at the <i>connection point</i> of a <i>retail customer</i>.</p> <p>Clause 12.1.1 adds further uncertainty by referring to a metering installation including equipment for load control or measurement of reactive energy being governed by an instrument “other than the Metrology Procedure”, where as CitiPower / Powercor considers the Metrology Procedure is required under the NER to address those two issues specifically.</p>	

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				<p>CitiPower / Powercor has in excess of 300,000 integrated AMI meters that provide load control specifically in support of the application of a Network Tariff; that as such would not be deemed to be a Network Device under this draft procedure clause 12.1.1. This is clearly in contradiction to the definition of a Network Device which allows DNSPs to control the network for the purpose of providing network services, such as load control.</p> <p>The NER Clause 7.8.6 (a) (3) and (b) (2) specifically permits a DNSP to provide services to a retail customer from a Network Device, as long as those services are incidental to the provision of Network Service and reasonably required to provide a safe, reliable and secure network.</p> <p><u>LOAD CONTROL</u></p> <p>There is no requirement in NER <i>Network Device</i> definition or the NER rule 7.8.6 that; as per draft clause 12.1.1, a network device must be “performing a function other than supporting the application of a Network Tariff.” nor require “<i>another instrument</i>” to define its use to undertake load control or record Reactive Energy.</p> <p>The AEMC Final Decision makes it clear in its commentary at section 4.8.4 (pages 84 & 85) and section A4.5.1 (page 231) that existing Load Control is specifically intended to be considered as a Network Device.</p> <p>The same Final Decision makes it also clear that existing Victorian AMI meters are specifically intended to be considered network devices, and there is no limitation to its purpose relating to measuring reactive energy, which could be undertaken for the Network Tariff or for purely monitoring and operation of the Network as against for the application of the Network Tariff.</p> <p><u>REACTIVE ENERGY</u></p> <p>NER Rules 7.8.1 and 7.10.5 make it clear that the MC must record, store, collect, process and deliver Reactive Energy, where required, again there is no reference to other instruments, and the AEMO procedures should be consistent with the rules requirements in ensuring that occurs. Should the MC not provide Reactive Energy, or provide it freely under 7.10.5, then AEMO procedures should not in anyway preclude the DNSP’s bypass rights afforded under the NER to deploy a Network Device.</p> <p>CitiPower/Powercor has recently introduced kVA Demand Tariffs inclusive of some customers in the below 160MWh market, which require Reactive Energy metering to support that Network Tariff. In addition CitiPower/Powercor have in the order of 1.2M AMI meters that are all capable of measuring 4 quadrant energy and may at any time be undertaking Reactive Energy monitoring for the operation of the Network and therefore clearly a compliant Network Device purpose.</p> <p>CitiPower/Powercor recommends that 12.1.1 be clarified to ensure it is in accordance with the National Electricity Rules. In addition, there is no reference in 12.1 that refers to the full requirements of NER 7.8.6</p> <p><u>12.1.2 (b) Removal during Meter Churn</u> identifies that a load control “Network Device” can be removed if it is obsolete as a result of the meter churn, and no longer required, yet this is not referenced at all in 7.8.6? and provides no clarification as to how (and by whom?) that determination is made – Again this is not compliant with the requirements of NER 7.8.6 and particularly (d) (ii) – (iv).</p> <p>Procedural improvement: The first paragraph of Clause 12.1.1 is ambiguous.</p> <p>We note AEMO’s response and revised re-wording, but under the current drafting it is not clear that a network device can be a meter that is no longer used for energy measurement associated with the application of a network tariff.</p> <p>We suggest rewording to: “For the purposes of clause 7.8.6 of the NER, any <i>meter</i> that provides functionality to monitor, operate or control the <i>network</i> for the purposes of providing <i>network services</i> must be treated as a <i>network device</i>.”</p> <p>Procedural improvement: The second paragraph of Clause 12.1.1 should be re-worded to not preclude the metrology procedure. Although this paragraph exists in the current metrology procedure, its purpose in the new arrangement should be re-considered. Equipment for load control is, by definition, a network device and is now considered in the NER and metrology procedure. Similarly reactive energy is now considered in the NER and metrology procedure.</p> <p>We suggest rewording to:</p> <p>“Where the metering installation includes equipment for load control or the measurement of reactive energy, the installation and operation of that equipment may be governed by other instruments in addition to the metrology procedure, for example, a ‘use of system’ agreement between the LNSP and the FRMP.”</p> <p>The distinction between a “control” service in 12.1.2 (b) (i) and a “switching” service in 12.1.2 (b) (ii) is unclear. Can they be combined?</p> <p>Ergon Energy has approximately 450,000 meters that provide load control specifically in support of the application of a Network Tariff. We are concerned clause 12.1.1 is ambiguous, and may be interpreted in a manner such that any meter which is “supporting the application of a network tariff” will not be deemed to be a “network device”. Such an interpretation would be inconsistent with clause 7.8.6 of the NER and the definition of a Network Device; which enable DNSPs to utilise network devices to “monitor, operate or control the network for the purposes of providing network services, which may include switching devices, measurement equipment and control equipment”.</p> <p>Ergon Energy recommends that 12.1.1 be clarified to ensure it is interpreted in accordance with the NER.</p> <p>Clause (c):</p>	

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				This does not flow from the initial sentence. Suggest rewording. Was the intention to read as; ...c) in other circumstances as allowed under the NER.	
61.	Metropolis Metering	12.1.3	Network Devices	As per 12. As per stage 1 response, the definition being "...performing a function other than supporting the application of a Network Tariff" is unclear. It appears that any metering that is used for market settlements will be considered a network device. This is clearly not the intention, nor in any way aligned with the NER. 12.1.3 It should be clear that an LNSP may not, except in emergency situations, break MPs seals or affect the metering installation. Once a seal is broken, the MP cannot provide assurance of the accuracy or safety of the installation.	This has been resolved in the redrafting of section 12.
62.	AGL	12.1.3	Obligations if Alterations to Metering Installations or Network Devices are Required	The same obligations do not appear to apply for each participant's equipment. Why would an LNSP need to get agreement for isolation/alteration from the MC and MP and not a notification only? If so, why isn't the same requirement for MC/MP to the LNSP in instance of Network Device alteration? Networks will be monitoring their supply via these devices.... Suggest that the obligations be consistently applied between the parties. For site commissioning purposes, the LNSP may need access to meter terminals to complete testing. Similarly, the MP may require access to the terminals at a network device. Agreement of isolation is onerous – as opposed to notification of isolation. Provision of details of seals seems unnecessary as long as the parties undertaking the various work is authorised.	In the new Rules, the MC is the person responsible for controlling access to, and security of, the metering installation (NER 7.3.1 (a)(3)) The obligations are as required by the NER. Disagree – this would affect the MC's obligation to manage access to the metering installation. AEMO believes that details on seals are required, as the breaking of a seal can have an impact on the metrological veracity of the metering installation.
63.	Endeavour Energy	12.1.4	Network Devices	Procedural improvement: Clause 12.1.4 is ambiguous because it does not including timing obligations. We suggest a 2 business day SLA for notifying the removal of a network device. In addition we suggest that the NMI be included in information provided to the LNSP. We suggest rewording to: If an MC removes a <i>network device</i> in accordance with clause 7.8.6(f) of the NER, the MC must, in addition to providing the notifications required by clause 7.8.6(g) of the NER, provide the following records in electronic format to the LNSP within 2 business days of the network device removal: a) The records defined in clause 7.8.6(h) of the NER; b) The NMI, type, asset number and serial number of the <i>network device</i> removed, the name of the <i>network device</i> owner, where those details are provided on the <i>network device</i> itself; and c) The type, asset number and serial number of any additional <i>network device</i> that was not removed, the name of the <i>network device</i> owner of any other <i>network device</i> where those details are provided on the <i>network device</i> itself.	AEMO disagrees with the proposed amendment and refers Endeavour Energy to section 4.3(b) of the MP SLP, which contains requirements for the notification of a removed network device.
64.	AGL	13.1	Metering Data Services	para starting The MC or Surely this obligation now sits only with the MC or AEMO. If it extends beyond the MC then at best it can only extend to the parties who can engage an MC, which is both FRMP and large customer.	AEMO has assessed this provision and is happy that it is accurate
65.	CP/PC	13.1	Metering Data Services	REACTIVE ENERGY The NER Rules 7.8.1 and 7.10.5 make it clear that the MC must record, store, collect, process and deliver Reactive Energy, where required, again there is no reference to other instruments, and the AEMO procedures and SLRs should be explicit and consistent with the rules requirements in ensuring that occurs. ie The MC or FRMP (where applicable) must use MDP(s) for the provision of <i>metering data services</i> in accordance with clause 7.3.2, 7.8.1(b) and 7.10.5 of the NER.	We are prepared to add 7.8.1 to this provision, but 7.10.5 details obligations on MDPs.
66.	AGL & UE	13.2	Metering Data Collection	Item 257 – provided in 1 st round consult – agreed and not amended. Last para: ...each metering installation is read at least once every three months.... This would align it with the feedback provided and also aligns with the MDP SLP 3.4(c).	Agreed.
67.	Activestream	13.2	Metering Data Collection	The jurisdictional rules do not have significant relevance to data collection, they are more related to installation	This section deals mainly with type 5 accumulation boundaries that relate to the method of data collection.
68.	Ausgrid	13.2	Metering Data Collection	New Paragraph: "The MC must use reasonable endeavours to ensure energy data collected from a type 4A, 5 or 6 metering installation is transferred to the relevant metering data services database within one business day of the energy data being collected from the metering installation."	An MDP is the only party that is accredited to read data from the metering installation.

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				There is no reciprocal obligation on the MC to ensure metering data is transferred to the MDP within one business day of reading.	
69.	Endeavour Energy	13.2	Metering Data Collection	<p>We submitted the below comments in the initial consultation. AEMOs' response is 'agreed', however the procedure was not updated. We have repeated our comments again and request that the procedure be updated accordingly.</p> <p>Procedural improvement: The paragraph states 'The MC must use reasonable Endeavours to ensure that energy data is collected from a type 5 or 6 <i>metering installation</i> and transferred to the relevant <i>metering data services database</i> no more than two <i>business days</i> prior to, or two <i>business days</i> subsequent to, the Scheduled Read Date for that <i>metering installation</i>.' This is inconsistent with clause 3.4.e and 3.4.f of the Service Level Procedure (MDP). We suggest rewording this paragraph to align with clause 3.4.e and 3.4.f of the Service Level Procedure (MDP).</p>	On further review, clause 13.2 of the Metrology Procedure is not inconsistent with clauses 3.4.e and 3.4.f of the MDP SLP. The Metrology Procedure says that data must be collected and delivered to the metering data services database within 2 days. The MDP SLP says that (3.4.e) the data must be collected within 2 days of the scheduled read date, and (3.4.f) that once collected, the data must be delivered to the metering data services database with 1 day of collection. Clause 13.2 is correct as it stands.
70.	EA	13.2	Metering Data Collection	<p>For <i>metering installations</i> that do not have <i>remote acquisition</i>, and where the MC is not a TNSP, Should this be LNSP (i.e. the default MC?)?</p>	This provision complements clause 7.5.1 of the NER
71.	AGL, AusNet Services, Lumo/Red	13.4	Access to Metering Data	<p>Numbering not fixed.</p> <p>AusNet Services recommends fixing the duplicated points (a) and (b)</p>	Agreed
72.	CP/PC	13.4	Access to Metering Data	<p>REACTIVE ENERGY</p> <p>The NER Rules 7.8.1 and 7.10.5 make it clear that the MC must record, store, collect, process and deliver Reactive Energy, where required, and the AEMO procedures and SLRs should be explicit and consistent with the rules requirements in ensuring that occurs.</p> <p>le</p> <p>(a) Access to <i>metering data</i> must be provided in accordance with <u>clause 7.10.5 of the NER and the Service Level Procedure (MDP)</u>.</p>	Clause 7.15.5 of the NER is the correct cross-reference.
73.	Lumo/Red	13.5	Verification of Metering Data for Type 4A, 5, 6 and 7 Metering Installations	<p>Confirmation is required from AEMO that the heading as per the draft Procedures (clean) is correct, i.e. Verification of Metering Data for Direct Connected Small Customer Metering Installations, Type 4A, 5, 6 and 7 Metering Installations</p> <p>If so, then this clause would exclude CT connections and Large Customers.</p>	This is correct. Provisions for other metering instalaltion types are contained in the NER.
74.	AusNet Services, AGL, UE	13.5	Verification of Metering Data for Type 4A, 5, 6 and 7 Metering Installations	AusNet Services suggests given the heading typically has no legal meaning the paragraph must state the obligation on the MC only applies for Direct Connected Small Customer Metering Installations.	Agreed
75.	Activestream	13.5	Verification of Metering Data for Direct Connected Small Customer Metering Installations, Type 4A, 5, 6 and 7 Metering Installations	<p>Under 13.5 it is not clear if the verification of metering data as per sample testing Plan is also applicable for Type 4 Direct connect Small customer Metering installations. Active Stream believe that it should not be applicable to type 4 Direct Connect Metering and should be clearly clarified in this clause.</p> <p>Please clarify under 13.5 whether or not type 4 whole current meters are also required to have data verification as per sample testing plan. Active Stream reject having a requirement to provide data verification for type 4 whole current meters as a mandatory requirement under clause 13.5.</p>	Agreed
76.	Power and Water Corporation – NT	13.5	Verification of Metering Data for Type 4A, 5, 6 and 7 Metering Installations	Heading: The terms “direct connect” and “whole current” have been used interchangeably in the document, suggest consistency in the document with the use of one or other or alternatively, use a note at the start of the document which indicates that both means the same thing. Further suggest the use of the terminology in other relavnt documents.	The term “direct connected” is used twice in a heading, and “whole current” is referenced once in the context of the name of a standard.
77.	Various	13.5	Verification of Metering Data for Type 4A, 5, 6 and 7 Metering Installations	At a recent meeting with MPs and MDPs, it was suggested that the reference to AS2490 in paragraph (a) should be deleted.	In light of the lateness of the suggestion, AEMO proposes to hold back consideration of this suggestion until the next update to this procedure.
78.	AAD	13.8	AEMO's Metering Data Obligations	<p>Clarify each group</p> <p>13.8.2. Load Profiling – CLP</p> <p>13.8.3. Load Profiling – NSLP</p>	AEMO believes that this is clear in the text.

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79.	AGL	14	Emergency Priority Procedures	<p>Procedure need to be clear.</p> <p>Not well written for minimum standards.</p> <p>This section more properly belongs in the Service Level procedures.</p> <p>The initiation of EPPs will impact Service Levels to LNSPs and impact services provided to FRMPs</p> <ul style="list-style-type: none"> There also needs to be some sort of obligation to ensure that the other affected parties (eg FRMPs) are advised that the LNSP has triggered the Emergency Priority Procedures as this may affect service orders or meter reads for those NMLs which in turn will affect Customers, 	<p>AEMO considers that the emergency priority procedures are not about service levels.</p> <p>AEMO's obligation under clause 7.8.5(b) is to develop procedures that set out:</p> <ol style="list-style-type: none"> (1) the criteria for determining when an emergency condition is present and which <i>metering installations</i> will be affected by the emergency condition; and (2) where a <i>Metering Coordinator</i> supplies services to a <i>Local Network Service Provider</i> from a <i>metering installation</i> that is affected by an emergency condition, which services the <i>Metering Coordinator</i> must prioritise at the request of the <i>Local Network Service Provider</i>. <p>The clause does not give AEMO the power to set out an emergency response protocol. The matters suggested as material for section 14 are not appropriate.</p>
80.	Ergon Energy	14	Response to Emergency Events	<p>To mitigate the operational difficulties emergency conditions will bring to the market under the new market arrangements, Ergon Energy also recommends that Metrology Procedure: Part A ensures DNSPs and MCs have processes in place in relation to their supply obligations after emergency events (e.g. flood, cyclone etc.). We recommend that the procedure require DNSPs and MCs to agree on the restoration and customer re-energisation process after an emergency event, including replacement and repair of affected metering installations. Such a requirement is vital to efficient restoration after widespread outages, particularly in regional areas. For example, supply restoration can only be achieved where the LNSP is available to re-energise the site and the MC has installed metering in-line with the restoration work.</p>	<p>The processes referred to in the submission are matters that should fall out of parties' emergency response plans. In light of recent events such as cyclones and floods affecting parts of the NEM, AEMO understands that these should already be in place. It is for the LNSPs to agree with MCs in their service agreements their expectations of how MCs' performance is to be addressed during emergency conditions.</p> <p>AEMO has an obligation to specify:</p> <ol style="list-style-type: none"> 1. the criteria that LNSPs and MCs must take into consideration when they specify in their service agreements what constitutes emergency conditions – which is what section 14.1 seeks to achieve; 2. which metering installations are likely to be affected by an emergency conditions – which is what section 14.2 seeks to achieve; and 3. the prioritisation of the provision of services affected by an emergency condition – which is what section 14.3 seeks to achieve. <p>The operational protocols to apply during an emergency condition are to be agreed between the LNSP and MC, subject to AEMO's requirements, as detailed in section 14.</p>
81.	EA	14	Emergency Priority Procedures	<p>Given this related to how emergency jobs should be prioritised EA believes it would be beneficial to specify the actions and timeframes</p>	<p>These arrangements should be the subject of commercial agreements as they will vary by network and even within a network.</p>
82.	Ergon Energy	14.1	Criteria for determining Emergency Condition	<p>While Ergon Energy notes that AEMO does not intend to restrict LNSPs and Metering Coordinators (MCs) from agreeing on a definition of 'emergency condition' in their service agreements, we consider it would be preferable for AEMO to define 'emergency condition' as without such clarity, there will likely be ambiguity, a lack of accountability and different service standards existing throughout the market. For example, as different MCs will likely operate within the same region, LNSPs may end up having different definitions of 'emergency conditions' with different MCs. This could lead to circumstances where emergency conditions are declared for certain customers, whilst other customers with a different MC have a different level of service provided. This would create confusion for customers, and LNSPs in their response to emergency situations wherein they would be required to identify which premises are impacted by an agreed emergency condition and those which are not.</p> <p>Notwithstanding the above, in regards to the proposed criteria that LNSPs and MCs must consider when defining 'emergency conditions' within service agreements; Ergon Energy considers that the criteria does not accurately reflect 'emergency conditions' in practice, as clause 14.1(a) could be interpreted to encompass planned interruptions. If AEMO intends for this criteria to be used as a basis for defining 'emergency conditions', the criteria should be amended to reflect unplanned / unforeseen supply disruptions only, and not applied to planned interruptions that are otherwise captured by National Energy Customer Framework notification procedures.</p> <p>As such, Ergon Energy recommends emergency condition criteria 14.1(a) is changed from "disruption to power supply...", to: "unplanned interruption to the general power supply to one or more sites, regardless of duration</p>	<p>We agree with the sentiment.</p> <p>Ergon Energy must not forget that the context for these provisions is metering. The requirement for AEMO to develop emergency priority procedures is contained in Chapter 7 of the NER, which deals with metering. As such, what AEMO can prescribe in these procedures is limited by its context. We understand that it is critical to get emergency response plans to work as intended, AEMO has no legitimate role in ensuring that occurs. LNSPs should ensure consistency within their own networks to avoid the types of issues referred to in the submission. As the requestor/payer of the services, LNSP should be in a position to specify its requirements.</p> <p>As to the comment concerned section 14.1 (a), we have clarified that we mean unplanned disruptions only.</p>
83.	EA	14.1	Criteria for determining Emergency Condition	<p>EA believes that this section can benefit from being more explicit which what the criteria must contain given that minimum emergency criteria should not be left to agreements but rather, standard market guidelines.</p> <p>Suggested reword of the last part of the paragraph is</p>	<p>We don't think that the suggestion achieves AEMO's objective, which is for the parties to contemplate whether the listed criteria should be part of the definition. Indeed, for some parties, it might</p>

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				"AEMO expects the definition must account for the following criteria"	be more appropriate to have different levels of emergency requiring a different level of response. For example, a failure in the communications network used in the delivery of metering data would require a very different response to a flood.
84.	Lumo/Red	14.2	Metering Installations Affected	Type 7 metering installations should not be excluded from being affected by an emergency condition. As traffic lights and public lighting can be affected by an emergency condition determined by the LNSP, e.g. Natural disaster. For safety reasons there would be a need for these installations to be included within the emergency procedure to ensure inclusion of prioritisation for reconnection of this and other meter installations.	There is no physical meter in a metering installation type 7. Hence, there is no need for any service to be carried out other than an adjusted calculation, which hardly requires special treatment. AEMO understood the emergency priority procedures as having to address the prioritisation of physical services where the metering installation itself is affected.
85.	AGL	14.3	Prioritisation of Services by MC in Emergency Condition	What is this clause trying to say? ITEM 297 raised by AusNet about clarity and AEMOs response agreed and redrafted . The redrafting does not provide further clarity to the intent. AGL believes If the EPP is initiated by LNSP an obligation rather than 'agreement' should be the trigger for the delivery of services from the MC with respect to Customer safety and Supply load. AusNet Services still considers section 14.3 as redrafted is still unclear. There maybe any number of commercial arrangements between LSNPs and MCs, however there is an important principle that must be stated and that is "LNSPs and MCs must prioritise services for safety purposes, such as disconnection or reconnection, over those services for purely commercial reasons".	We refer to our response to issue 82.

Table 2 – Metrology Procedure: Part B

In the first round of submissions, AEMO acknowledges that a number of comments were made about formatting issues and the need for consistency. AEMO has reviewed the procedure to correct any of these formatting issues. Again in the second of submissions, AEMO received a number of comments about formatting or typographical issues. Where appropriate, AEMO has taken these comments on board. The detailed comments about formatting or typographical errors are not included in the table below.

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1.	Red / Lumo	0		Recommendation is that 'forward' is reinstated within this procedure in line with AEMO's Settlements Estimation Guide references E = Forward Estimate. The work undertaken by participants to include this term within the 2013 Procedure should not go to waste. The term 'forward estimate' continues to be used today in forums and workshops with an understanding by Industry participants of its representation.	The term "Estimation" is defined in the Glossary as "The forward estimation of metering data". AEMO considers the definition of the term accurately supports the requirements within this procedure.
2.				Forward Estimation The term "estimate", as related to the creation of metering data for a period in the future, has been replaced with the term "forward estimate". The change to remove 'forward' is not supported throughout the proposed changes to this Procedure.	
3.	Pacific Hydro	1.3.	Related Documents	Is this the complete list of related documents?	This was only ever intended to include references to related AEMO documents. This is made clear now. Participants should also note that the list in the table will be alphabetised for the final published version.
4.	United Energy			Can this list of reference material be extended to include all pertinent documents please?	
5.	Active Stream			The following related documents should be referred to: -Jurisdictional documents and glossary and framework -MDP SLP	
6.	Momentum	2.1.	General Validation, Substitution and Estimation Requirements	<p>The MC must coordinate the resolution of issues arising from the non-performance of metering systems, including any liaison with associated Registered Participants, retailers, LNSPs, MP(s), and MDP(s), and ENM(s). The MC must respond promptly to requests for remedial action from the MDP or AEMO.</p> <p>It's slightly confusing through the document (and in other documents) where "Registered Participants" have been included however ENM has been explicitly called out, however as per the Rules, ENM is also a Registered Participant.</p>	<p>ENM is an accredited service provider. ENM is not a <i>Registered Participant</i>. The definition of <i>Registered Participant</i> in Chapter 10 of the NER is amended by National Electricity Amendment (Embedded Networks) Rule 2015 No. 15.</p> <p>These are the relevant parts of the amended definition: A person who is registered by AEMO in any one or more of the categories listed in rules 2.2 to 2.7. However: ... (c) as set out in clause 8.2.1(a1), for the purposes of some provisions of rule 8.2 only, ... and <i>Embedded Network Managers</i> who are not otherwise Registered Participants are also deemed to be <i>Registered Participants</i>; and (d) as set out in clause 8.6.1A, for the purposes of Part C of Chapter 8 only, ... and <i>Embedded Network Managers</i> who are not otherwise <i>Registered Participants</i> are also deemed to be <i>Registered Participants</i>. Hence, they are only deemed to be <i>Registered Participants</i> for very limited purposes.</p>
7.	AusNet Services	2.1.	General Validation, Substitution and Estimation Requirements	<p>"The MDP must apply Substitution processes in accordance with this Procedure, including any default Substitution procedures agreed to with the MC necessary to ensure that metering data is delivered to AEMO and Registered Participants."</p> <p>We consider that this does not make sense with the deletion of these words.</p>	Agreed. Procedure updated.
8.	Red Lumo	2.2.	Substitution requirement	<p>The current Procedures state:</p> <p>1.5 Metering data substitution requirement</p> <p>1.5.1 The <i>Metering Data Provider</i> must undertake <i>substitutions</i> on behalf of AEMO or the <i>responsible person</i>, as appropriate, in a manner that is consistent with the <i>metrology procedure</i>. <i>Substitutions</i> may be required in the following circumstances;</p> <p>+++++</p> <p>The following clause as written indicates that all participants must agree regardless of which participants have been affected. I.e. if only one or two are affected all three are to agree.</p> <p>(i) When the FRMP, LR, and LNSP have all agreed and subsequently informed the MDP that a previous Substitution was inaccurate and that a re-Substitution of <i>metering data</i> is required</p> <p>The current procedure states the following:</p> <p>(j) When the affected parties have all agreed and subsequently direct the <i>Metering Data Provider</i> that a previous <i>substitution</i> is in error and that a re-<i>substitution</i> of <i>metering data</i> is required. Where the parties cannot</p>	Accepted in concept. Procedure updated.

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				reach agreement, the <i>Rules</i> ’ dispute resolution procedures apply, and the existing <i>substituted</i> data should remain until the resolution of the dispute is achieved. Recommend that AEMO update the drafting to state: (i) When all affected parties (the FRMP, LR, and/or LNSP as the case may be) have all agreed and subsequently informed the MDP that a previous Substitution was inaccurate and that a re-Substitution of <i>metering data</i> is required.	
9.	Endeavour Energy	2.2.	Substitution requirement	Procedural improvement: The following text was removed “Where metering data has not completed Validation as part of the registration or transfer of a connection point.” This text should be re-instated because metering data must be substituted in the scenario contemplated by this text.	Agreed. Procedure updated.
10.	AusNet Services	2.3.	Estimation requirement	We suggest the Jurisdictional Table We suggest should this be updated to have the correct reference and correct document name or will this be done as part of the Jurisdictional updates? We previously raised these changes and AEMO’s previous feedback was that this would be corrected.	Jurisdictional references will be updated when jurisdictional requirements are finalised.
11.	AGL	2.3.	Estimation requirement	The references to Jurisdictional requirements are incomplete	
12.	Ausgrid	2.3.	Estimation requirement	Clause (c): Reword. “Where the current published NSRD has changed due to a revised reading schedule and the existing estimated metering data does not extend to or beyond the new NSRD.	Agreed in concept. Procedure updated.
13.	Ausgrid	0	General	The concept of “Actual” <i>metering data</i> needs to be returned to the procedure. In many instances, the removal of the previous term “Actual” and the use of other glossary and Rules terms has altered the meaning of the requirements.	Agreed. “Actual Metering Data” is now a defined term in the Glossary. This term has been applied to the procedure where appropriate. It now means interval metering data and accumulated metering data that has passed Validation without Substitution. Note that the procedure never allocated names to each of the quality flags.
14.	United Energy	2.4.	Metering data quality flags	Suggest revert to the current Metrology definition of A for actual data that is validated. The amended definition of A is unclear.	
15.	Ausgrid	2.4.	Metering data quality flags	The definition of when an “A” flag is allocated to metering data has been distorted. Firstly, “Validated” is not in the Glossary. And secondly, the definition implies the “A” flag can be applied to <u>ANY</u> metering data. The concept of “Actual” metering data needs to be returned to the procedure and included in the Index.	
16.	Red Lumo	2.4.	Metering data quality flags	As per the initial consultation response provided by Red and Lumo agreed within AEMO’s response, the description of ‘A’ has not been updated as recommended. I.e. the following definition for ‘A’ is from the current Metrology Procedure: Part B v5.30: 1.7 Metering data quality flags 1.7.1 <i>Metering Data Providers</i> must assign the relevant <i>metering data</i> quality flags to <i>metering data</i> as follows: (a) A - For <i>validated</i> and accepted actual <i>metering data</i> recovered from the <i>metering installation</i> . The current description of ‘For Validated <i>metering data</i> ’ allows for any type of metering data, this quality flag is to be limited to actual metering data. The description is to be updated to reflect the current Procedure version for ‘A’ as mentioned above. +++++++ Typographical amendment: the following clause has <i>metering data</i> twice: Final Substitution (b) If Validated metering data metering data is unexpectedly recovered from the <i>metering installation</i> and a final Substitution has been undertaken in accordance with paragraph (a), the MDP must replace the final <i>substituted metering data</i> with the <i>accumulated metering data</i> or <i>interval metering data</i> and maintain a record of the reason Also the above clause is not correct as per the above initial response in reference the description of ‘A’. The clause should be: If Validated actual <i>metering data</i> is unexpectedly recovered from the <i>metering installation</i> and a final <i>substitution</i> has been undertaken in accordance with paragraph (a), the MDP must replace the final <i>substituted metering data</i> with the actual <i>metering data</i> and maintain a record of the reason and instance +++++++ We recommend that the following clause is to be updated in line with the above from: Final Substitution The MDP must undertake final Substitutions in the following circumstances: (g) Where the MDP has found previous Validated <i>metering data</i> to be erroneous To:	

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				<p>The MDP must undertake final <i>metering data substitution</i> in the following circumstances:</p> <p>(g) Where the MDP has found previous Validated actual <i>metering data</i> to be erroneous</p> <p>++++++</p> <p>The following statement as written is incorrect:</p> <p>The MDP may replace type 6 final <i>substituted metering data</i> with accumulated <i>metering data</i> that spans consecutive Meter Readings</p> <p>We recommend that this is updated to the following:</p> <p>The MDP may replace type 6 final <i>substituted metering data</i> with actual <i>metering data</i> that spans consecutive Meter Readings</p> <p>++++++</p> <p>As noted above in the Glossary section, the following terms are currently incorrectly defined or not defined within the Glossary and Framework document. These have been applied within this document and are to be updated as per the current Metrology Part A Procedure v5.30 to reflect the participant that undertakes the process. The definitions within the Glossary and Framework do not include the participant.</p> <p>substitution, substitute, substituted</p> <p>A process undertaken by a <i>Metering Data Provider</i> or AEMO for the substitution of missing (null) or erroneous <i>metering data</i> or where the <i>metering data</i> has failed the <i>validation</i> process</p> <p>validation, validate, validated</p> <p>A process undertaken by the <i>Metering Data Provider</i> to test the veracity and integrity of <i>metering data</i> prior to transfer to AEMO and other <i>Registered Participants</i>.</p>	
17.	Active Stream	2.4.	Metering data quality flags	<p>Definition of 'A' is validated metering data. The definition of metering data includes sub data...this is misleading. All metering data is validated, including substituted data? Need to state interval and accumulated data. These are defined terms meaning Actual meter data obtained from meter.</p> <p>(b) & (g) – need to check the definition of metering data. It includes Interval, accumulated and substituted data. These clauses do not apply to substituted data. Hence accumulated and interval should be reinstated</p>	
18.	Red Lumo	3.2.	Substitution Rules	<p>The following statement is incorrect within this section:</p> <p>The MDP must ensure that all <i>substituted metering data</i> are replaced with <i>interval metering data</i> when it becomes available</p> <p>As per the current Procedures <i>interval metering data</i> should be replaced with actual <i>metering data</i>.</p> <p>2.2.11 The <i>Metering Data Provider</i> must ensure that all <i>metering data substitutions</i> are replaced with actual <i>metering data</i> when that <i>metering data</i> becomes available.</p> <p>The statement should read as follows:</p> <p>The MDP must ensure that all <i>substituted metering data</i> are replaced with actual <i>metering data</i> when it becomes available.</p>	
19.	Red Lumo	4.2.	Substitution and Estimation Rules	<p>The following statement is incorrect, actual has been excluded:</p> <p>The MDP must ensure that all <i>substituted metering data</i> and <i>estimated metering data</i> are replaced with <i>accumulated metering data</i> or <i>interval metering data</i> when it becomes available</p> <p>The current Procedures has the following clause:</p> <p>3.2.2 The <i>Metering Data Provider</i> must ensure that all <i>metering data substitutions</i> and forward <i>estimations</i> are replaced with actual <i>metering data</i> if and when that <i>metering data</i> becomes available</p> <p>Actual is to replace accumulated and interval:</p> <p>The MDP must ensure that all <i>substituted metering data</i> and <i>estimated metering data</i> are replaced with actual <i>metering data</i> when it becomes available</p>	
20.	Red Lumo	5.2.	Substitution and Estimation Rules	<p>The following statement is incorrect:</p> <p>The MDP must replace all <i>estimated metering data</i> with either <i>accumulated metering data</i> or <i>substituted metering data</i></p> <p>The current Procedures has the following clause:</p> <p>4.2.2 The <i>Metering Data Provider</i> must replace all <i>metering data</i> forward <i>estimations</i> with either actual or <i>substituted metering data</i></p> <p><i>Accumulated</i> has been incorrectly applied this should be actual:</p>	

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				<p>The MDP must replace all <i>estimated metering data</i> with either <i>actual metering data</i> or <i>substituted metering data</i></p> <p>+++++</p> <p>The following has been incorrectly updated with <i>accumulated</i> when this should be actual:</p> <p>(a) When accumulated <i>metering data</i> covering all or part of the Estimation period is obtained</p> <p>The current Procedures has the following:</p> <p>(a) When actual <i>metering data</i> covering all or part of the forward <i>estimation</i> period is obtained;</p> <p>Recommend that actual is reinstated.</p> <p>+++++</p> <p>The following clause has been incorrectly updated with <i>accumulated</i> where this should remain as actual as per the current Procedure</p> <p>(j) The MDP has no accumulated <i>metering data</i>.</p> <p>The current Procedure:</p> <p>4.2.8 (d) The <i>Metering Data Provider</i> has no actual <i>metering data</i> for the <i>scheduled reading date</i> for this <i>connection point</i>.</p>	
21.	AGL	2.3		<p>How has the MC been authorised to approve those estimations?</p> <p>The MC is not financially affected by the actions it takes in these processes. Its actions however do impact the financial affected parties (FRMP, LR, LNSP) who may not be contracted with the MC e.g. customer appointed MC</p> <p>The MC will be responsible and potentially liable, and should therefore engage the financially affected parties it has commercial arrangements with.</p>	The only party who can perform Estimations is the MDP. The only party the MDP can perform those estimations on behalf of is the MC who appointed the MDP.
22.	AGL	2.5	Metering data quality flags	<p>para starting (d) Where the...</p> <p>Isn't it more important that the notice is provided to the MC who then directs the MDP</p> <p>The MC will be responsible and potentially liable, and should therefore engage the financially affected parties it has commercial arrangements with.</p>	<p>AEMO considers that the MC's obligations are sufficiently detailed in the Rules and the procedures.</p> <p>The MC is not a financially impacted party with respect to erroneous metering data. Any notification required by the MC should be left to the commercial arrangement between the MC and the MDP.</p> <p>Performing substitutions is currently the function of the MDP, AEMO does not see a compelling reason to change this approach.</p>
23.	AGL	2.5	Metering data quality flags	<p>Para starting (e) As a result</p> <p>Shouldn't this notice go to the MCs to direct the MDPs</p> <p>The MC will be responsible and potentially liable, and should therefore engage the financially affected parties it has commercial arrangements with.</p>	
24.	Momentum	2.4.	Metering data quality flags	<p>(d) <i>Where the MDP has received a notice that the FRMP, the LR and the LNSP have agreed that the metering data is erroneous and that a final Substitution is required.</i></p> <p>No mention about MCs role in the above however MC is also impacted as a result of final Sub.</p>	
25.	AGL	3.3.	Substitution Types	AGL believes the MC should be responsible for organising the agreement for type 18 substitution, rather than the MDP	
26.	AGL	3.3.	Substitution Types	<p>Type 16</p> <p>AGL believes the MC should be responsible for organising the agreement for type 16 substitution, rather than the MDP</p>	
27.	AGL	4.2.	Substitution and Estimation Rules	<p>Para starting MDP must not perform</p> <p>The MC should be responsible for organising the agreement for type 53 & 56 substitution, rather than the MDP</p>	

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28.	AGL	5.2.	Substitution and Estimation Rules	Para starting The MDP must not perform type 64... Governance The MC has the key role in establishing agreements across the financially affected parties The process of seeking agreements etc. seems to be inconsistently applied across different clauses	
29.	Endeavour Energy	2.4.	Metering data quality flags	Formatting error: The last paragraph in clause 2.4 should be referenced as 2.4.h as it is referenced earlier in this section.	Agreed. Procedure updated.
30.	Endeavour Energy	2.4.	Metering data quality flags	Procedural improvement: We note that the key word 'accepted' is removed from the description of the 'A' quality. The term Validated is not defined in the glossary, however even if this term is taken to mean the past tense of Validation, which is defined, then at best it only means that the metering data has undergone a process to test the veracity and integrity of metering data, it does not mean that it did pass the test. We suggest rewording the description of the 'A' quality to: "For <i>metering data</i> that passed Validation."	See response to issue 14.
31.	AusNet Services	3.1.	Application of section 3	"3.1 ... the MDP must ensure the selected Substitution values correctly align with the adjoining intervals of metering data." In relation to 3.1 AusNet Services previously recommended clarifying that this obligation only apply to CT connected (and not small customer) metering installations. AEMO's response noted that these requirements apply to mass-market customers today. We agree that it applies today to mass-market customers, and this is the reason why substitutions type 17 and 54 may be appropriate in some circumstances. However, data smoothing is not always appropriate and certainly not for mass-market residential customers. Further, the process requires subjective analysis and creates a disproportionate amount of work for the MDP compared to the value of energy. Given the limited set of circumstances for which data smoothing is required and the amount of work required to ensure the data aligns with the adjoining intervals, we strongly recommend the replacement wording of either "for all Substitutions undertaken for CT connected metering installations with remote acquisition of metering data, the MDP must ensure that the selected Substitution values correctly aligns with the adjoining intervals of metering data." Or alternatively "where appropriate, the MDP must ensure that the selected Substitution values correctly aligns with the adjoining intervals of metering data."	Agreed. The provision has been removed.
32.	AGL	3.1.	Application of section 3	The clause requires the MDP to ensure the selected Substitution values correctly align with the adjoining intervals of <i>metering</i> data and that any intervals of <i>metering data</i> adjacent to the Substituted period are valid. Aligning the substitution intervals is manually intensive and not appropriate for Mass Market customers.	
33.	TasNetworks	3.1.	Application of section 3	TasNetworks believes the full application of this section is onerous for mass market customers. Ie " <i>the MDP must ensure the selected Substitution values correctly align with the adjoining intervals of metering data</i> "	
34.	United Energy	3.1.	Application of section 3	Feedback A: The statement "aligning with adjoining intervals" implies an onerous profile smoothing activity for substitution. This is not appropriate or cost effective for Mass market meters. This should be a requirement only for LARGE installations.	
35.	Jemena	3.1.	Application of section 3	To avoid doubt and provide certainty, Jemena recommends this clause explicitly include a paragraph in section 3.1 that states: "For Victorian AMI metering installations installed in accordance with NER section 9.9C the MDP may perform Substitutions in accordance with Section 4" Reference to " <i>metering installations</i> installed under 9.9A, 9.9B" at the end of section 3.3, after the 'Type 20 – Churn Correction' heading, is not helpful. Locating reference this does not allow for the full set of substitution procedures that the Victorian AMI RWD meters. Moving the reference to section 3.1 will comprehensively address the intent of supporting compatibility of the procedures with the current metrology of the existing Victorian AMI meters.	AEMO agrees that the substitution rule relating to AMI Meters is not appropriate under section "3.3 Substitution types". It has been moved to section "3.2 Substitution rules".
36.	United Energy	3.1.	Application of section 3	Feedback B: As we have articulated in our general introductory comments (G2) United Energy strongly recommends eliminating the VICAMI distinction completely, and instead create a grandfathering clause that maintains the Victorian AMI meters as MRIM/RWD with Type 5 metrology in perpetuity. However, If AEMO do not accept this view then UE recommend adding a third paragraph in this section to clarify the allowable VICAMI substitution methods and base it on the second paragraph of text inserted in the latest Draft. The paragraph to be inserted could read: "For VICAMI metering installations installed in accordance with NER section 9.9C the MDP may perform Substitutions in accordance with Section 4" Introducing this extra paragraph will comprehensively address the intent of supporting compatibility of the procedures with the metrology of the existing VICAMI installations, and is a better place to call out the VICAMI exceptions than	AEMO disagrees and considers that the allowance is sufficient for VIC AMI metering installations to continue to operate without requiring significant alterations to process or systems.

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				where it resides in the text at present which is at the end of Section 3.3 after the Type 20 – Churn Correction heading, and which does not allow for the full set of Substitution procedures that VICAMI meters currently align to.	
37.	Momentum	3.1.	Application of section 3	VIC AMI installations should be specifically called out in this section for adding clarity.	
38.	Jemena	3.3.	Substitution Types	Jemena is concerned that the reference to <i>metering installations</i> , installed under 9.9A, 9.9B and 9.9C of the NER at the very end of section 3.3 is problematic for Victorian distributors. It may not be the intent of AEMO to limit Victorian AMI meters to Substitution types 51 and 52 – but locating this reference at the end of section 3.3 has the unintended consequence of Victorian AMI meters not being able to comply with these procedures without costly industry wide change, because the text does not additionally offer the use of Substitution Types 53, 54, 55, 56, 57 and 58, which are presently in use for VICAMI meters. Also, refer to our described in our response to Section 3.1.	<p>As VICAMI meters are remotely read meters, substitution rules in section 3 apply. However, clause 3.2(k) has been added to allow substitution methods 51 and 52 to be used for VICAMI Meters. AEMO considers that type 51 and 52 are the only methods for which there are no equivalents in section 3.</p> <p>For each of the remaining substitution methods in section 4, an equivalent method exists in section 3 (see example below). As such, AEMO does not consider that it is necessary to allow types 53-58 to be used for VICAMI Meters.</p> <p>Example: Type 58: type 19 Type 57: type 18 Type 56: type 18 Type 55: type 16 Type 54: type 17 Type 53: type 16</p>
39.	United Energy	3.3.	Substitution Types	United Energy is of the view that the text under the heading VICAMI Meters at the very end of section 3.3 means that the existing fleet of VICAMI meters will not comply with these procedures without costly industry wide change, because the text does not additionally offer the use of Substitution Types 53, 54, 55, 56, 57 and 58, which are presently in use for VICAMI meters. UE recommends re-writing the text and moving its location to Section 3.1 as described in our response to Section 3.1.	
40.	AGL	3.3.	Substitution Types	VICAMI metrology needs to allow the 50 series substitutions A VICAMI should be able to adopt the type 5 metrology	
41.	AGL	3.2.	Substitution Rules	para starting where there is a metering installation... Include NER reference Given that the timeframes have been removed (parenthesis) but the NER periods referenced; suggest to include the reference to the NER Clause.	
42.	AGL	3.3.	Substitution Types	para starting For <i>metering installations</i> installed Accreditation is required for Substitution types 51 and 52. Include this requirement.	AEMO disagrees, accreditation requirements are provided in the accreditation procedures. An MDP can only operate under the scope of their accreditation and is audited accordingly.
43.	Ausgrid	3.3.	Substitution Types	Type 13: Ausgrid notes there is no obligation to use any SCADA data provided by any party other than AEMO. Ausgrid contends there are instances where other sources are SCADA are required to perform validation and substitution activities.	AEMO disagrees – the requirement to use SCADA data only extends to SCADA data that has been accepted by AEMO and provided for use by the MDP as necessary.
44.	AusNet Services	3.2.	Substitution Rules	MDPs may perform all Substitution types except type 16 or 18 without the agreement of the agreement of all affected FRMPs, LNSPs or LRMPs. MDPs may change the quality flag to an existing type 16 or 18 Substitution without seeking further agreement from those parties. Feedback from AEMO in first round advised this had been corrected. AusNet Services statement was that we agreed with the removal of MPs from this statement and the change of FRMP to Retailers. We also believe that affected needs to remain to provide clarity that all Retailers that have a financial interest in this data need to agree.	AEMO disagrees – there can only be two retailers who are financially interested in metering data at any given point in time, the FRMP and the LR.
45.	ActewAGL	3.3.	Substitution Types	Type 16, this means they must seek agreement for every NMI every time. Very onerous for the volumes expected after Dec '17. Reword statement to: The MDP may undertake to use another method of Substitution (which may be a modification of an existing Substitution type), where none of the existing Substitution types apply, unless informed otherwise by the FRMP, LR, or LNSP, undertake Substitution for any period greater than seven days for type 1-3 metering installations or greater than fifteen days for other metering installation types. This may include changes to existing Substitutions for any period where those affected parties have directed that as a result of Site or End User information, the original Substitutions are in error and a correction is required.	AEMO disagrees – the requirements for the use of this substitution type must be viewed alongside the requirements for the management of a metering installation malfunction, the timeframes and process for which support the need for agreement on approach to substitution.
46.	Ausgrid	3.3.	Substitution Types	Type 16: Ausgrid notes the discussions held in the POC workshops regarding the removal of the Type 16 substitution method code thus allowing the MDP to perform the initial substitution of metering data using the best method available. Ausgrid also notes the only three submissions on this method in stage 1 again support this position. The need to coordinate a method of substitution for the volumes of type 4 meters we are now introducing with 3 different parties is ludicrous. Ausgrid again suggests this substitution method be abolished or alternatively, only be applicable to NMIs with a classification of LARGE or with metering installations containing instrument transformers.	
47.	Endeavour Energy	3.3.	Substitution Types	We submitted comments in the initial consultation and have noted AEMO's response and wish to provide further feedback with an alternate suggestion.	

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				<p>Obtaining prior agreement for type 1-3 metering installations should be mandatory because the amount of energy concerned is significant and would impact on customers, networks and retailers if the substitution is not performed as accurately as possible. We believe that this is a reasonable obligation given that this is the current obligation, metering competition does not directly impact the volume of these metering installations and that it is in the interest of all parties to agree to a substitution method given the significant amount of energy concerned.</p> <p>Procedural improvement: Obtaining prior agreement should be mandatory before using type 16 for type 1-3 metering installations to ensure that billing disputes are minimised, especially given that a MDP is allowed to change the quality flag to 'F' without seeking agreement. We suggest rewording type 16 to:</p> <p>"Where the <i>Metering Data Provider</i> is required to undertake a <i>metering data substitution</i> for any period greater than seven days for type 1-3 <i>metering installations</i>, consultation and agreement must be obtained from the <i>financially responsible Market Participant</i>, the <i>Local Retailer</i> and the <i>Local Network Service Provider</i> for the <i>connection point</i> as to the <i>metering data substitution</i> to be performed.</p> <p>Where the MDP is required to undertake Substitution for any period greater than fifteen <i>days</i> for other <i>metering installation</i> types, the MDP must consult and use reasonable endeavours to reach an agreement with the FRMP, LR and the LNSP for the <i>connection point</i>. This may include changes to existing <i>metering data substitutions</i> for any period which were carried out where the affected parties have directed that as a result of site or customer specific information, the original <i>metering data substitutions</i> are in error and a correction is required."</p>	
48.	Ausgrid	3.3.	Substitution Types	<p>Type 20: Ausgrid notes that the wording of the Type 20 substitution method has been re-drafted BUT the table it refers to remains incorrect. The purpose of this method is provide an MDP with a means of substituting for missing churn data in the absence of historic data – Sixteen of the nineteen 'like days' precede the substitution day.</p> <p>A new table is required that references prospective 'like days'.</p>	Agreed. A new table has been added to type 20 substitution rule.
49.	AusNet Services	3.3.	Substitution Types	<p>Type 20 Meter Churn</p> <p>AusNet Services considers that this is still not going to work referring this to table 1. Table 1 has some notes down the bottom that make it unusable in this scenario of type 20, such as:</p> <p># Occurring in the same week as the Substitution day.</p> <p>## Occurring in the week preceding that in which the Substitution day occurs</p> <p>these # state that the days must be in the same week or week preceding. The current MDP will only have data after the day of substitution.</p>	
50.	AGL	3.3.	Substitution Types	<p>Type 20:</p> <p>Redrafting and Reference to Table 1 has not resolved issues of data substitution.</p> <p>See Appendix A table 1-2 row 112 pg 77 for previous comments on this issue. I.e. Ausgrid comment.</p>	
51.	Active Stream	3.3.	Substitution Types	<p>The use of Type 20 is not correct. You can't use Table 1 as you do not have Previous data. You have to use Forward dated data. That is data that is after the churn period. The current Procedures only allow substitutions from a previous day prior to the churn date. This is not possible with churn subs. This same point has been made in a few submissions.</p>	
52.	Endeavour Energy	4.2.	Substitution and Estimation Rules	<p>Procedural improvement: Type 57 - Prior to First Reading - Customer Class Method has a new obligation where the MDP must obtain agreement from the FRMP, the LR and the LNSP. We believe that this extra obligation should be removed because the amount of energy concerned is not significant and the extra burden of obtaining agreement from the FRMP, the LR and the LNSP is not proportional to the risk that the substitution is not accurate, nor does it align with AEMO's reasoning for other substitution methods where absolute agreement is not required.</p> <p>In addition we believe that the metering competition rule change does not impact on the use of this substitution method therefore the current obligation should be maintained.</p>	AEMO agrees with Endeavour Energy that the current requirements (i.e. limiting the roles in this section to the RP = MC) are adequate and have amended accordingly.
53.	Momentum	4.3.	Substitution and Estimation Types	<p>Type 57 - Prior to First Reading - Customer Class Method</p> <p>Prior to the first Actual Meter Reading and where no previous metering data Historical Data exists for the <i>connection point</i>, the MDP may provide a Substitution or Estimation for the <i>metering data</i> based on the given ADL. The <i>interval metering data</i> must be <i>profiled</i> to suit the relevant End User class. MDPs electing to undertake this type of Substitution or Estimation must develop a suite of <i>profiles</i> acceptable to the MC, the FRMP, the LR and the LNSP for use and application.</p> <p>Please also provide clarity if ENM is impacted (as LNSP and ENM are being used interchangeably in MSATS).</p>	<p>AEMO does not consider the ENM to be impacted by the requirement of this provision.</p> <p>Please refer to the MSATS procedures for clarification regarding the ENM role in MSATS.</p>

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54.	Endeavour Energy	5.2.	Substitution and Estimation Rules	<p>Clause 5.2.b should allow for the scenario where during a schedule meter reading it is discovered that the accumulation meter is replaced by an interval meter. This is a scenario we expect to occur more often due to the metering competition rule change. The current obligation stipulates that a final substitution must be undertaken. However it would be reasonable to expect to have the final reading from the removed accumulation meter soon after therefore a substitution with an S flag would be more appropriate.</p> <p>We suggest rewording clause 5.2.b to:</p> <p>“When the Scheduled Meter Reading could not be undertaken, the MDP must replace the <i>estimated metering data</i> with <i>substituted metering data</i> with a quality flag of F unless it was identified that the <i>metering installation</i> no longer has an Accumulation Meter installed in which case a quality flag of S may be used.”</p>	Removal of accumulation meter – agreed and amended as proposed
55.	Endeavour Energy	5.3.	Substitution and Estimation Types	<p>Procedural improvement: Type 68 – Zero clause b suggests that this substitution method can be used as a result of a meter churn in accordance with the Service Level Procedures (MDP). However the Service Level Procedures (MDP) does not stipulate when this substitution method could be used for a type 6 meter. This causes confusion and we suggest that clause b from Type 68 – Zero be removed.</p>	<p>Agree – zeroes can only be used for interval metering installaitons and this is already considered in the interval metering sub types.</p> <p>Clause amended.</p>
56.	AusNet Services	4.2.	Substitution and Estimation Rules	<p>Regarding the statement “the MDP must notify the LNSP, the LR and the FRMP for the connection point of any Substitution or Estimation within two business days of the Substitution. Notification is achieved via the participant metering data file as detailed within the <i>service level procedures</i>.”</p> <p>Should be MDFF to be consistent with 3.2</p>	Agreed. Procedure updated.
57.	AusNet Services	6.1.	Substitution Rules	<p>The MDP must notify the LNSP, LR and FRMP for the connection point of any Substituted calculated metering data within two business days of the Substitution. Notification is achieved via the participant metering data file as detailed within the <i>service level procedures</i>.</p> <p>AusNet Service suggests this should be consistent with 3.2 and should refer to the “via the participant metering data file as detailed within the service level procedures MDFF”</p>	
58.	Red Lumo	6.1.	Substitution Rules	<p>Typographical amendment: The clauses have been repeated within this section, i.e. (a) & (b) have been applied twice.</p> <p>+++++</p> <p>The following statement has not been amended as requested by Red and Lumo within the initial consultation response provided, which AEMO agreed to:</p> <p>MDPs must not perform a type 74 Substitution without seeking the agreement with the FRMP, LR and LNSP</p> <p>We recommend that the following is included, as previously agreed by AEMO:</p> <p>MDPs must not perform a type 74 Substitution without prior agreement with the FRMP, LR and LNSP.</p>	AEMO considers that the clause referred to is not consistent with other agreed methods. It has therefore been deleted.
59.	Endeavour Energy	6.1.	Substitution Rules	<p>We submitted the below comments in the initial consultation. AEMOs’ response is ‘Provision re-drafted’, however the procedure was not updated as suggested.</p> <p>Clause 6.1.(b) stipulates that in the given scenario the substitution must be flagged as S but later in clause 6.1 it is contradicted because it states that ‘The MDP must flag all <i>calculated metering data</i> Substitutions as final (F).’ The metering competition rule change does not impact on unmetered supplies therefore we believe that changing obligations that comes with a cost to industry is unwarranted.</p> <p>Procedural improvement: Clause 6.1.(b) states that ‘... when the Inventory Table is subsequently updated for the period concerned, the <i>calculated metering data</i> must be flagged as <i>S metering data</i>’. However previously the obligation was to flag it as a ‘F’. We suggest that this obligation be reverted back to the ‘F’ flag to eliminate unnecessary cost for system changes.</p>	Agreed. Procedure updated.
60.	AusNet Services	6.1.	Substitution Rules	<p>Second (b)</p> <p>Having a S in this clause this contradicts the statement:</p> <p>The MDP must flag all <i>calculated metering data</i> Substitutions as final (F).</p>	
61.	AGL	6.1.	Substitution Rules	<p>para starting The MDP must base... clause (b)</p> <p>Poor wording – suggest:</p> <p>‘Data must be flagged as A metering data’.. change to</p> <p>Data must be flagged as Actual (A) metering data</p> <p>As well as Substituted (S) end of clause.</p> <p>See 2nd paragraph below as an example – ‘final’ (F).</p>	<p>The description for each quality flag is provided in section 2.4. This procedure did not apply names to each flag, just letters.</p> <p>For consistency purposes, the word “final” has been removed from the second paragraph.</p>

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ITEM	RESPONDENT	CLAUSE	HEADING	PARTICIPANT COMMENT	AEMO RESPONSE
62.	AGL	2.4.	Metering data quality flags	Table Quality Flag descriptors (eg A, S, E) should be spelt out as Actual – etc. to ensure clarity across procedures.	
63.	Momentum	7.2.	Validation of interval metering data alarms	(a) power failure / meter loss of supply for instrument transformer connected metering installations only This clause should be for all metering installations (as applicable), and not limited to instrument transformer connected metering installations only.	Agreed. Procedure updated.
64.	TasNetworks	7.2.	Validation of interval metering data alarms	TasNetworks believes the full application of this section is onerous for mass market customers. Ie <i>"The MDP must Validate interval metering data against the following Meter Alarms when these are provided in the meter: (a) power failure / meter loss of supply for instrument transformer connected metering installations only"</i> <i>The MDP must ensure that all metering data alarm reports are signed off and dated by the person actioning the data exception report review as part of the Validation process."</i> The process of manually signing off is an onerous requirement for what should be an automated process.	Agreed. Procedure updated.
65.	United Energy	7.2.	Validation of interval metering data alarms	The description of the metering alarms in this section is not consistent with the description of the metering alarms in the newly inserted section 4.10 in Metrology Part A. Additionally the Alarm description could be aligned with the Alarm reason codes description available in the MDFF Appendix E. Some examples: <ul style="list-style-type: none"> Time tolerance is not an available reason code in Appendix E of the MDFF specification Cycling redundancy check Error is marked as an obsolete code in Appendix F in the MDFF specification.	4.10 Metrology Part A: Agreed. This provision has been re-worded to ensure consistency with the provision in Metrology Part B MDFF Appendix E: AEMO notes that not all configured alarms are required to be delivered via MDFF. Changes to Appendix E and Appendix F are not required.
66.	AGL	7.2.	Validation of interval metering data alarms	Alarms not consistent with other alarm lists i.e MDFF CRC alarm – checksum alarm – not obsolete.	
67.	Active Stream	10.2.	Validations to be performed for metering installations with check metering or partial check metering	10.2e ii. This is not correct statement. Only the alarms identified in MDFF spec (Power Outage and Time Reset) will be sent to the registered participant. This statement implies all Meter Alarms will be sent via MDFF which is not correct. Alarms such as VT or phase failure, pulse overflow and cyclic redundancy errors will NOT be sent in the MDFF	Agreed.
68.	Ausgrid	7.2.	Validation of interval metering data alarms	Meter Alarms: Ausgrid disagrees with the statement that the 'current parameters are appropriate' – There are no parameters. If an MDP is expected to validate 'power outages' for example, what number of power outage intervals trigger the validation? The rules and/or parameters that trigger the investigation as a result of a failed validation need to be stated in the service level procedure.	Due to conflicting submissions, AEMO has re-considered and the provision has been reverted to match current requirement. AEMO considers that power outages alarm is important in that it allows the MDP to determine where consumption is actually zero. The rules or parameters that trigger an investigation are not specified in the service level procedure today. AEMO does not see a compelling to change this.
69.	Red Lumo	7.2.	Validation of interval metering data alarms	Refer to comments made within Metrology Procedure: Part A 4.10 Alarm Meters	Noted.
70.	Pacific Hydro	9.1.	Validation of metering installations with remote acquisition of metering data	Clauses (c), (d) and (e) have now been deleted; why?	Requirement in (c) has been included in section 9.1 – General Requirements. Requirement in (d) has been deleted on the basis that it is not an appropriate validation. (e) has been deleted on the basis that it is not a practical validation. Refer to Metropolis' submission in AEMO's Draft Determination Appendix A Table 2 line 179.
71.	Pacific Hydro	9.2.	Validation for manually read interval metering installations	Clauses (d) and (e) have now been deleted; why?	Requirement in (d) has been included in section 9.1 – General Requirements. Requirement in (e) has been deleted on the basis that it is not an appropriate validation.
72.	Momentum, Metropolis, AGL, AusNet Services, United Energy	9.1.	Validation of Metering Installations with Remote Acquisition of Metering Data	<u>(b) The NMI is within the range allocated to the relevant LNSP.</u> This is contrary with the NMI Procedures, and doesn't really fit here. What is the intent of this clause in this document?	Agreed. Requirement deleted.

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73.	AusNet Services	9.2.	Validation of Metering Installations with Remote Acquisition of Metering Data	Regarding 9.2 AusNet Services firstly notes (a) & (b) are duplicated, and secondly that the second set of (a) & (b) refer to whole current meters, but it is not clear where the first set of (a) & (b) apply only to CT connected meters? If so please state.	Procedure has been updated
74.	Endeavour Energy	9.2.	Validation for Manually Read Interval Metering Installations	Procedural improvement: It is not clear why some of the obligations only apply to whole current metering installations when it should be equally applied to non-whole current metering installations too. We suggest that the obligations be consolidated and be applicable to all metering installations	Agreed. Procedure updated.
75.	Endeavour Energy	9.3.	Validation for Metering Installations with Accumulated Metering Data	Procedural improvement: It is not clear why some of the obligations only apply to whole current metering installations when it should be equally applied to non-whole current metering installations too. We suggest that the obligations be consolidated and be applicable to all metering installations	Agreed. Procedure updated.
76.	United Energy	9.2.	Validation for Manually Read Interval Metering Installations	In clause 9.3 there is a requirement that before distribution of data, the metering data must be of the expected magnitude and profile shape for manually read interval meter customers. This is not even a requirement of remotely read customers and is not efficient and should be removed. The second clause (b) should be removed in 9.3. UE query where this is not required for remotely read (large and small) customers why the first b) is reasonable for manually read CT customers. The metrology and validations should be commensurate with the level of energy and risk now that remotely read meters will be the norm for all customers.	Agreed. Requirement deleted.
77.	Momentum	9.2.	Validation for Manually Read Interval Metering Installations	(b) — That the metering data acquired is of an expected magnitude and profile for the End User type. Has this been incorrectly striked off instead of from section 9.3 below?	
78.	AusNet Services	9.3.	Validation for Manually Read Interval Metering Installations	Regarding the duplicated (b) point in section 9.3 AusNet Services considers the obligation to carry out Validation to “that the metering data is acquired is of an expected magnitude and profile for the End User type” is completely inappropriate. The obligation to do this for remotely acquired metering data was removed from 9.2. Why has it been retained for notionally even smaller sites (that are manually read and measured as whole current)? We recommend removing this point. Also please fix up the duplication of points (a) to (c)	
79.	AGL	9.3.	Validation for Metering Installations with Accumulated Metering Data	See clean version Second (b) Validation on load type for end user – not appropriate for mass market Disconnect between marked up and clean versions	
80.	TasNetworks	9.3.	Validation for Metering Installations with Accumulated Metering Data	TasNetworks believes the application of the 2 nd (b) in this section is onerous for mass market customers. Ie <i>“the metering data acquired is of an expected magnitude and profile for the End User type.”</i>	
81.	Momentum	9.3.	Validation for metering installations with accumulated metering data	(b) That the metering data acquired is of an expected magnitude and profile for the End User type. The above clause can be completely striked off.	
82.	AGL	9.5.	Validation for metering installations with calculated metering data	There needs to be better obligations on managing the connection information for type 7 connections – too many are not connected and referenced incorrectly to the FRMP/LR All unmetered connections should have individual off market NMIs	AEMO does not consider that this issue can be included in the scope of this consultation. The respondent is advised to pursue this change through the market change management process.
83.	Endeavour Energy	4.1.	Application of section 4	Procedural improvement: To avoid a circular contradiction, the second paragraph should state that type 5 meters with communications can use substitutions listed in this section. We suggest rewording the second paragraph to: “The Substitution and Estimation requirements in this section 4 are only to be used for <i>metering installations</i> where <i>interval metering data</i> is manually collected as a Scheduled Meter Reading and for <i>metering installations</i> with <i>remote acquisition</i> installed in accordance with NER section 7.8.9(b). In the case that <i>remote acquisition</i> of	Agreed. Procedure updated.

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ITEM	RESPONDENT	CLAUSE	HEADING	PARTICIPANT COMMENT	AEMO RESPONSE
				<i>metering data</i> has failed at the <i>metering installation</i> and manual collection of <i>interval metering data</i> is required, the Substitution requirements specified in section 3 apply.”	
84.	Endeavour Energy	10.1.	General validation requirements	Procedural improvement: The change to the heading and lead-in clauses that defined the scope of sections based on meter type to metering installations with remote acquisition has inadvertent impact on obligations. AEMO addressed this issue by insert a clause that that allows for meters installed under 7.8.9.b of the NER to apply obligations that would normally apply to manually read interval meters. We suggest that a similar clause should be added in section 10.1 for consistency and to eliminate any doubt that this also applies to validation of metering data. We suggest adding a new paragraph in section 10.1: “For <i>metering installations</i> with <i>remote acquisition</i> installed in accordance with NER section 7.8.9(b), the MDP may perform Validation in accordance with section 10.4 and 10.5 instead of 10.2.”	Agreed. Procedure updated as suggested.
85.	United Energy	9.2.	Validation for manually read interval metering installations	In the tracked changes draft, clause 9.3 refers to validation of interval meter data, not 9.2. Clause 9.2 in the tracked changes draft refers to remotely read meters.	Reference has been updated.
86.	Metropolis	10.2.	Validations to be performed for metering installations with check metering or partial check metering	10.2(e): should refer to section 7.2 for alarm list.	Reference has been updated.
87.	Endeavour Energy	11.2.	Profile Preparation Service - Controlled Load Profile	We submitted comments in the initial consultation and have noted AEMO’s response and wish to provide further feedback and provide an alternative suggestion. Procedural improvement: Clause 11.2.1.b stipulates that the sample meter is to be treated as a type 4 meter. However AEMO decided, and published in the Power Of Choice Information Paper issued 8 April 2016, that the sample meter be considered as a network device (section 4.3, page 89). We suggest that clause 11.2.1.b be updated to reflect this decision and to remove any contradictions. We suggest rewording clause 11.2.1.b to: “Sample <i>meters</i> are to be treated as a <i>network device</i> ”	Metrology Procedure Part A provides details regarding Network Devices and 7.8.6 of the NER details network device use. AEMO has re-worded clause 11.2.1(b) to clarify the intent of the clause.
88.	Red Lumo	12.4.	ON delay and OFF delay	Red and Lumo seek further clarification from AEMO as to the response provided to Red and Lumo’s initial consultation submission of: ‘Procedure has been deleted’. The current Procedure has the following for this section: 14.5.1 This clause 14.5 applies only to the jurisdiction of the Australian Capital Territory. For the jurisdictions of Victoria, New South Wales, Queensland, Tasmania and South Australia the ON and OFF delays are zero. (a) The <i>responsible person</i> must use the ON delay and OFF delay for each day of the year as provided in the following tables, when determining the on time and off time of photoelectric cells in accordance with clause 14.3.5. The draft Procedure has: In Victoria, NSW, Queensland, Tasmania and South Australia the ON delays and OFF delays are zero. In the ACT the MC must use the ON delay and OFF delay for each day as provided in the following tables, when determining the on time and off time of photoelectric cells in accordance with section 12.2.4	AEMO notes Red/Lumo’s comment in the previous round of consultation as: “ <i>In Victoria, NSW, Queensland, Tasmania and South Australia the ON and OFF delays are zero.</i> <i>In the ACT</i> <i>Inconsistencies with the use of acronyms for some jurisdictions and not others</i> ” “NSW” and “ACT” have been replaced with “New South Wales” and “Australian Capital Territory” respectively.