AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Level 22
530 Collins Street
Melbourne VIC 3000

Postal address
GPO Box 2008
Melbourne VIC 3001

T 1300 858 724
F 03 9609 8010
E info@aemo.com.au

3 February 2023

Ms Anna Collyer
Chair
Australian Energy Market Commission
Sydney South
NSW 1235

By online submission

Dear Ms Collyer,

Draft Report - Review of the regulatory framework for metering services

AEMO welcomes the opportunity to provide a submission to the AEMC's draft report on the review of the regulatory framework for metering services, published for consultation on 3 November 2022.

AEMO supports the AEMC's recommendation for universal uptake of smart meters by 2030 and wishes to raise some options for the AEMC's consideration that might better enable the achievement of that objective.

These in summary are:

- Co-ordinating metering rollout activity

  AEMO considers that it is important for the targeted objective (i.e. rollout by 2030) to be aligned with an incentive (i.e. reward or penalty related to achieving or not achieving the objective) and for the achievement of the objective to be in the control of the party deemed to be accountable and subject to that incentive.

  AEMO notes that the AEMC considers it is most logical for the responsibility for continued smart meter rollout to be with Retailers, and therefore accountability against any rollout objective should also be with Retailers, as should the application of the incentive.

  AEMO suggests that if an incentive arrangement is sufficiently well-established, Retailers and their appointed Metering Coordinators are best placed to coordinate resources to obtain the most efficient and effective rollout.

  Conversely, a third party such as AEMO or the regional network services provider, is distant from the management of those resources and far less able to coordinate them to maximum effect.

- Utilising the method of unaccounted for energy allocation to provide an incentive for the deployment of smart metering

  The global settlement rule established a method for allocating unaccounted for energy (UFE) in the NEM. Presently, UFE is allocated based on the proportion of energy for which each retailer is responsible in each settlement area. Retailers who have taken steps to mitigate against UFE-contributing factors, by

installing remotely read smart meters, are currently allocated UFE on the same basis as those who have not.

AEMO believes a UFE allocation method that uses a weighting-factor, directly linked to the volume of energy related to manually read meters, would provide both an equitable approach for allocating UFE and a direct incentive to Retailers to actively progress the smart meter rollout.

Such a method should be implemented as soon as is practical and AEMO submits that this could operate in place of more complex compliance management.

Attachment A expands on these matters which AEMO expects to be of interest to the AEMC and other related parties. The attachment responds to the questions posed by AEMC in the draft report and raises several other technical matters that AEMO considers are material, including:

- metering installation testing and inspection, and
- the management of metering installation malfunctions.

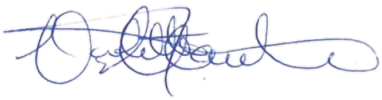
The attachment also outlines the potential benefit of changes to the metering framework proposed in the AEMO rule change request for flexible trading arrangements and minor energy flow metering, as it relates to this review.

Attachment B provides background material in support of AEMO's views on necessary changes to the requirements for metering installation maintenance.

AEMO looks forward to working with the AEMC as it progresses towards finalising the review.

Should you wish to discuss any of the matters raised in this submission, please contact Kevin Ly, Group Manager – Reform Development & Insights on kevin.ly@aemo.com.au.

Yours sincerely,



Violette Mouchaileh

Executive General Manager, Reform Delivery

Attachment A: AEMO's expanded response to the Draft Report - Review of the regulatory framework for metering services

Attachment B: AEMO position paper – Whole current metering installation testing and inspections (October 2019)

Attachment A: AEMO's expanded response to the Draft Report - Review of the regulatory framework for metering services

Responses to consultation questions

The draft report seeks stakeholder feedback across a range of important themes as well as targeted consultation questions including:

- Establishing 2030 as a target date for universal penetration of smart metering *(Question 1).*
- Ongoing maintenance requirements for metering installations *(Questions 2-4)*
- The preferred mechanism to accelerate smart meter deployment *(Questions 2-5)*
- How to best coordinate smart meter installation at multi-occupancy connections? *(Question 8)*

AEMO values the breadth of matters explored in the draft report and appreciates this invitation to provide feedback. There is strong agreement that the uptake of smart metering is a vital component in facilitating the transition to a lower-emissions power system as well as enabling market participants to better manage the energy system and provide enhanced services and products to customers.

AEMO provides specific responses to the questions highlighted above and raises some other related matters (including an alternative incentive regime) for the AEMC's consideration.

1. Establishing 2030 as a target date for universal penetration of smart metering

AEMO considers that the AEMC's analysis of the benefits of establishing a target for the universal penetration of smart metering is well-considered and supports the establishment of a circa 2030 target.

In addition to the benefits of universal penetration considered in the draft report, NEM-wide adoption of smart metering will also facilitate better outcomes in energy settlement. The timely delivery of accurate interval metering data across the NEM will increase the accuracy of preliminary and final NEM settlement, reducing variances between final settlement and subsequent revisions within the 6-month settlement 'window'.

AEMO also expects that unaccounted for energy (UFE) will reduce due to:

- Commercial losses being resolved by legacy meter replacement (e.g. losses relating to unaccounted for unmetered connections, inaccurate metering equipment (including due to a malfunction), electricity theft and errors in NMI Standing Data, accounting, and record-keeping); and
- Estimation errors associated with profiling accumulation metering being eliminated - to estimate accumulation metering energy volumes for settlement, AEMO calculates and applies the net system load profile for each 5-minute trading interval; the difference between the estimated volumes and actual volumes in each 5-minute interval are estimation errors. These will be progressively reduced as smart meter penetration increases.

These improvements will increase efficiency and remove costs for participants, particularly in relation to reductions in UFE allocation and cash flow stability.

2. Maintenance requirements for metering installations

Metering installation testing and inspection remain critical in assuring the ongoing accuracy of metering data in the NEM. However, it is logical that the current ongoing maintenance for metering installations planned to be displaced through the accelerated rollout are removed, regardless of the model or mechanism chosen as proposed in section B.3 of the draft report.

The removal of testing and inspection requirements should materially reduce maintenance costs relating to type 5 and 6 metering installations and will remove the need for the current mechanisms which support amelioration of metering installation malfunction for these metering installation types.

Further, AEMO supports the proposals in section C.3 of the draft report regarding changes to the requirements for replacement of malfunctioned metering installations; specifically the removal of the exemption process for small customer connections and the replacement with two defined categories of malfunction, each with its own specified timeframe for resolution.

With the removal of metering installation malfunction requirements for type 5 and 6 metering installations, family failure related malfunctions will be limited to small customer metering installation types 4S and 4A. This is important as Metering Coordinators are therefore only required to meet the rectification timeframes for malfunctions related to metering installation testing that they themselves carry out.

Accordingly, Metering Coordinators can adjust their approach to testing (e.g. family size and sub-group identification, in accordance with AEMO requirements and subject to approval) in order that their potential test findings match their capability to resolve malfunctions in accordance with timeframes specified in the NER.

In line with the outcomes of the review, AEMO will consider extending or amending existing guidelines for the sample testing of small customer metering installations to assist Metering Coordinators in this area.

AEMO does not consider that changes are necessary to the current metering installation malfunction and exemption requirements for large customer connections in the NEM, particularly as they relate to high voltage metering connections. The nature of these metering installations and the process to rectify malfunctions is materially different to that of a small customer metering installation, often needing specialised equipment and methods agreed for the management of metering data over the exemption period.

Whilst not expanded on in the draft report, AEMO considers the changes proposed in previous submissions to the review regarding NER Schedule 7.6 are critical in supporting efficient and robust ongoing testing and inspection of metering installations. In particular, the drafting changes to NER Tables S7.6.1.2 and S7.6.1.3 provided in AEMO's initial submission to the review are intended to provide clarity and support the flexible and contemporary approach to testing and inspection for smart metering installations discussed in AEMO's submission to the Directions Paper.

In October 2019, AEMO distributed a position paper to inform Metering Coordinators of the approach that AEMO takes when considering asset management strategies provided in relation to whole current metering installations (which includes most smart meters deployed in the NEM). This position paper has been provided as Attachment B.

Amending the tables in NER S7.6 as proposed would remove any ambiguity and enable AEMO to expand on the 2019 position paper to provide further guidance to Metering Coordinators. This would most likely be achieved by expanding on AEMO's published Alternative Testing and Inspection Guidelines for Metering Installations in the NEM[1].

3. The preferred mechanism to accelerate smart meter deployment

In considering any mechanisms to support and achieve an accelerated deployment of smart meters, it is vital to first confirm the roles and responsibilities for small customer metering installations. AEMO notes the AEMC considers that the most logical for the responsibility for continued smart meter rollout, and the appointment of Metering Coordinators to manage the practical aspects of installation, to be with Retailers.

Having reconfirmed this responsibility for smart metering installation it is most logical that the targeted objective (i.e. rollout by 2030) is aligned with an incentive (i.e. reward or penalty related to achieving or not achieving the objective).

AEMO considers that if there were already sufficient incentives for Retailers to rollout smart metering, or if the currently applied practice of distribution network service providers (DNSPs) raising metering installation malfunction replacement notices would demand smart metering installation shortly thereafter, there would not be a need to consider acceleration at this time.

Accordingly, it is reasonable to consider that some additional incentive is required and, conversely, that without an incentive any target for rollout which is earlier that the predictions based on current activity is unlikely to be achieved.

It is challenging to consider the likely effectiveness of any of the four acceleration mechanisms presented in the draft report, without understanding the incentive(s) that will support their action and delivery.

The draft report suggests that conformance management will need to act as the incentive; applied by the AER and relating to each Retailer's performance against stipulated targets. AEMO agrees that this is likely to require a significant increase to the AER's compliance and enforcement workload.

AEMO considers that this arrangement has the potential to be cumbersome and is likely to require caveats and have consequences that would deviate from the intended outcome of NEM wide smart meter penetration.

For example:

- Customer switching activity might materially diminish or enhance any given Retailer's report on customers transitioned to smart metering, unrelated to their effort to obtain the same, in any reporting period.
- Analysis of performance on a per Retailer basis might need to consider multiple variances, for example if a regionally focused Retailer has most of their customers in one annual batch of targeted replacements,

[1] https://aemo.com.au/-/media/files/electricity/nem/retail_and_metering/accreditation/aemo_-_alternate_testing_and_inspection_guidelines_for_metering_installations_in_the_nem_v20_final.pdf?la=en

the assessment of their performance against any annual target might be less reasonable than a Retailer who has customer volumes spread evenly over the entire accelerated period.

- A list of “unable to complete” reasons and definitions would need to be created in order that Retailers where not unreasonably assessed, including more complex issues such as customer refusals, safety issues and those connections that cannot be accessed such as vacant premises.
- Installers might be incentivised, directly or indirectly, to mark installations as “unable to complete” in order that they be removed from the reporting mechanisms against which compliance measures are assessed.

AEMO notes that a number of these factors, and others such as Retailer of Last Resort (RoLR) events, have been considered as being applicable to Options 3 and 4 in the draft report, but contend that they are equally relevant to progression of either Option 1 or 2, particularly if the proposed conformance management approach is adopted as the incentive.

In the instance where a material volume of connections are classified as “unable to complete”, further work will be required to resolve issues preventing future installation of a smart meter. This is to achieve the original objective and may require additional deployment planning to target the remaining sites. As these connections are likely to be geographically spread, any efficiencies obtained from moving door-to-door in the initial phase are likely to be diminished at this later stage.

AEMO has considered the four options for meter deployment acceleration presented in the draft report and believes Option 3 (*Retailer penetration target*) to be the most viable options, as discussed below:

- **Options 1 and 2** (*Legacy meter retirement plans)* - these options require a third party (either the DNSP, the AER or AEMO) to construct a rollout plan based on the concept of retiring (identifying for removal) metering installations in batches.

  Whilst these mechanisms are proposed to be performed in consultation with affected parties, the appointed planner will be a third party to the metering installation; distant from both the management of resources needed to affect metering installation activity, unlikely to be subject to a material incentive relating to rollout completion, and unlikely to be capable of creating a universal rollout plan that will fit the needs and capabilities of every Retailer and their appointed metering service providers in any 12 month period and across the entire rollout timeframe.

  It is possible that Option 1 (DNSP to create the plan) might result in the DNSP targeting metering installations that are problematic for them (e.g. access or safety issues), for early smart meter exchange, regardless of whether their replacement is the most efficient plan for retailers to be required to adopt.

  If either option is progressed, additional processes and costs will be incurred by a party or parties distant from both the obligation to install smart meters, and the management of resources needed to do so. AEMO concedes that if Retailers considered themselves materially less capable of planning an effective rollout with their nominated metering services providers than the alternative of reacting to a plan that is ultimately determined by a third party (albeit through a form of consultation), then the costs of imposing such a requirement in the NER might be valid.

- **Option 3 and 4** (*Retailer or Metering Coordinator penetration target*) - these options require either Retailers or Metering Coordinators to meet a set of requirements, including reporting, and to plan to meet the designated rollout targets.
  AEMO does not consider Option 4 to be viable. Metering Coordinators are appointed to perform works on behalf of the Retailer to whom they are commercially contracted and under whose direction they operate. Having reconfirmed responsibility for rollout to be with Retailers, it would be peculiar to establish an arrangement whereby a party contracted to perform works for Retailers would carry the burden, by application of an incentive, for that responsibility.

  Option 3 (Retailer penetration target) presents as the most viable mechanism as it has the potential to align the responsibility for smart meter installation with an acceleration target, and the application of any incentive.

  This option also places responsibility for rollout with the party closest to the management of all resources and associated factors, including:

  - appointment of Metering Coordinators and the marshalling of their resources across the NEM, including technical field staff, logistics and stock management, auditing, and issue rectification,
  - customer liaison, communication, and issue resolution, and
  - customer churn (other than unplanned RoLR events), including forecasted customer retention, loss, and gain (so to the extent that this is a feature that will affect any option, AEMO contends that Option 3 provides the optimum opportunity for it to be included as part of deployment plan consideration).

  Most problematic is the implementation of the incentive mechanism to support this, or any other option. AEMO considers that an alternative incentive arrangement could be implemented to support the adoption of Option 3, or a variance of it, as described in the section below.

4. Utilising the method of unaccounted for energy allocation to provide an incentive for the deployment of smart metering

In 2018, the Commission published the final rule and determination for global settlements in the NEM[2]. The global settlement rule established a method for the allocation of unaccounted for energy (UFE) in the NEM. Presently, UFE is allocated based on the proportion of energy that each retailer is responsible in each settlement area.

In finalising the rule, the Commission did consider proposals and submissions which sought to adjust the method for UFE allocation such that it would be weighted toward types of metering installations that are more likely contributors of UFE and less weighted, or not applied at all, to types of metering installation that are less likely contributors.

[2] https://www.aemc.gov.au/rule-changes/global-settlement-and-market-reconciliation

In particular, the submission to the draft determination by ERM Power presented a case for this approach[3]. Whilst the proposals presented by ERM Power and others were not adopted at the time of making the rule, AEMO considers that it is opportune to reconsider whether this mechanism should be adopted to act as the incentive in support of an accelerated rollout of smart metering.

UFE is comprised of a range of factors that includes accounting errors, inaccuracies in calculations of DLFs, unmetered loads, energy theft, and inherent inaccuracies relating to the settlement of manually read and accumulation metering. Installation of smart meters will not eliminate UFE, however it does remove or mitigate against a number of these contributory factors, including:

- Inaccuracies relating to the settlement of manually read and accumulation metering; and
- Legacy accounting errors and energy theft.

Under current UFE allocation mechanisms, Retailers who have taken steps to mitigate against some UFE-contributing factors, by installing remotely read smart meters, are allocated UFE on the same basis as those who have not.

If the method of allocating UFE were amended to include a weighting-factor directly linked to the volume of energy related to manually read meters, in AEMO's opinion it would both more equitably allocate UFE and provide a direct incentive for Retailers to actively progress rollout of smart meters. Such a method could be implemented at a date, or series of dates in the future.

For example, an initial weighting factor could be applied say in 2025, with progressive increases to that weighting factor occurring in subsequent years. This could be preceded by a "soft start" whereby reporting on UFE allocation could be provided in advance of its application so that Retailers are aware in advance of UFE reduction or increase in relation to their performance against rollout objective.

Potential benefits of utilising UFE allocation to act as an incentive in support of an accelerated rollout of smart meters includes:

- No new compliance mechanisms or enforcement regimes are required to be established within the AER to support smart meter acceleration.
- Retailers who proactively install smart meters can benefit from a reduction in UFE allocation to their settlement statement and cash flow stability (i.e. due to interval data being provided for settlement rather than accumulation data, cash flow related to 'final' settlement which occurs 20 business days after the trading week will vary less to the two revisions that take place months later).
- Retailers would be increasingly incentivised, as weighting increases over time, to resolve problematic metering installations rather than move them into "unable to complete" reports for later resolution.
- Inability to complete smart meter installation at vacant premises would not negatively impact Retailers as nil energy consumption would attract nil UFE allocation.

[3] https://www.aemc.gov.au/sites/default/files/2018-10/ERM%20Power_1.pdf

Providing that the weighing mechanism was sufficiently well-designed, some UFE might still be allocated to energy related to remotely read interval metering, acknowledging that a proportion of UFE relates to technical losses, such as errors in the calculation of distribution loss factors, not resolvable through smart meter installation alone.

AEMO considers that if adopted this mechanism might have further application, such as adding UFE weighting factors to customer connections where Metering Coordinators have not met the conditions in the NER for maintenance testing and inspection, where device accuracy and metering installation condition requirements have not been demonstrated.

The global settlement rule change required that AEMO report on UFE levels and actions to facilitate the reduction of UFE over time. AEMO considers it likely that future such reports will present a case for the implementation of a weighting factor as described above, for the reasons previously stated, should it not be progressed within the remit of this review.

5. How to best coordinate smart meter installation at multi-occupancy connections?

The draft report proposes a coordinated approach to the replacement of legacy meters that are connected via a shared fusing arrangement to the distribution network – called the 'one-in-all-in' approach.

Through various discussions with stakeholders, AEMO understands that a large proportion of shared fusing arrangements will be where one fuse connects two metering installations, such as a duplex (e.g. a single building with two connected dwellings that have separate entrances on a single property). Whilst there will be more complex arrangements, it is important to consider how any mandatory mechanism will apply in the variety of situations, both simple and complex, in which it will be applied.

AEMO considers that the current arrangements designed to assist in resolving these types of connection should be viewed in the context of an accelerated rollout, where retailers have both a target for the rollout of smart meters and an associated incentive, encouraging the achievement of that target.

AEMO submits that where Retailers are sufficiently incentivised to install smart metering (and with Metering Coordinators naturally incentivised to do the same), coordination of meter changes for installations that are connected to the same distribution fusing could readily be coordinated by these parties through commercial means, not requiring complex processes and the need to place additional obligations on DNSPs.

If, for example, Metering Coordinators had some limited access to the NMI Discovery search capability in MSATS, on-site identification of a shared fusing arrangement could prompt the identifying Metering Coordinator to discover the Retailer(s) for the shared connection(s). The Metering Coordinator could then offer to change all metering devices at the same time to all interested Retailers.

Further, proactive Retailers and Metering Coordinators could determine any such arrangement in advance in order that meters are replaced without site-by-site approval being required. Such an arrangement would not compel Retailers for shared fuse connections to agree to use any one or more Metering Coordinators services, but it would likely deliver efficiencies and assist in their endeavours to meet rollout objectives and associated incentives.

With sufficient targets and incentives in place, AEMO submits that the current requirements for DNSP involvement might be sufficient without need for additional process or complexity. In comparison, and for duplex connections and similar, the 'one-in-all-in' process appears overly complex and cumbersome.

To facilitate the approach described above, AEMO notes that Metering Coordinators would need to be provided with limited access to NMI Discovery in the NER, as is currently determined in NER 7.15.5.

6. Other related matters

Supporting greater success in smart meter installation

For smart metering rollout to be as efficient as possible, AEMO suggests that there is value in considering the proposals to establish a category of metering installation identified in AEMO's rule change request for Flexible Trading Arrangements and Minor Energy Flow Metering in the NEM[4] and for it to be applied, in limited circumstances, to standard market connections.

The physical space available at a proportion of customer connections will complicate or prevent the installation of smart metering. Restrictions of this type are likely to be more prevalent within multi-occupancy dwellings where legacy meters, often with far smaller physical dimensions than modern smart meters, are often 'sandwiched' together in uniform rows. Costly electrical work can be required to make these types of connections suitable for the installation of standard smart meters.

The AEMO proposals in the rule change request would enable the deployment of metering installations with a much smaller physical footprint. Whilst some services (e.g. remote disconnect and reconnect) might not be able to be provided under AEMO's proposed model, the core benefits of advanced metering installation would be obtained (e.g. via access to remotely read 5-minute interval data), the legacy metering installation would no longer need to be maintained or read and costs that might otherwise have needed to be incurred to reconfigure customers' metering enclosures or meter boards, involvement of the DNSP to isolate supply to support this reconfiguration, and the likely re-visits to install the smart meter itself, could be avoided.

Power quality information – content and access

AEMO is keen to contribute to the AEMC's ongoing consideration of the content, format and information transfer of matters related to power quality data from smart meters. In addition to matters regarding the systems required to facilitate power quality data delivery, AEMO is likely to benefit from access to power quality data in the role of system operator.

AEMO agrees that the current requirements of the minimum services specification are sufficient to provide power quality information to interested parties, as evidenced by the smart meter device capabilities that have been adopted to-date.

[4] https://www.aemc.gov.au/sites/default/files/2022-05/ERC0346%20Rule%20change%20request%20pending.pdf

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Whole Current Metering Installation Testing & Inspections

October 2019

Position Paper

A report for the National Electricity Market

Important Notice

Purpose

AEMO has prepared this document to provide information about AEMO's position on asset management strategies for whole current meters, as at the date of publication.

Disclaimer

This document or the information in it may be subsequently updated or amended. This document does not constitute legal or business advice, and should not be relied on as a substitute for obtaining detailed advice about the National Electricity Law, the National Electricity Rules, or any other applicable laws, procedures or policies. AEMO has made every reasonable effort to ensure the quality of the information in this document but cannot guarantee its accuracy or completeness.

Accordingly, to the maximum extent permitted by law, AEMO and its officers, employees and consultants involved in the preparation of this document:

- make no representation or warranty, express or implied, as to the currency, accuracy, reliability or completeness of the information in this document; and
- are not liable (whether by reason of negligence or otherwise) for any statements or representations in this document, or any omissions from it, or for any use or reliance on the information in it.

1. Introduction

1.1 Purpose of this position paper

This position paper outlines the requirements of Chapter 7 of the National Electricity Rules (NER) for whole current metering installation testing and inspections and AEMO's view regarding the requirements for approval of asset management strategies.

AEMO have not placed restrictions on the alternative practices that a Metering Coordinator may determine to propose, however AEMO will be assessing whether the proposals demonstrate that they meet the intent of Schedule 7.6 of the NER and provide the same or better level of assurance that is provided in the NER for time-based testing and inspection.

AEMO must consider and assess all asset management strategies on a case by case basis.

Nothing in this document will oblige AEMO to grant or exercise any administrative or regulatory discretion, or to otherwise fetter, constrain or otherwise impair the due exercise of any administrative or regulatory discretion exercisable by AEMO.

1.2 NER requirements and intent

Under clause S7.6.1(c) of the NER, the Metering Coordinator (or any other person arranging for testing) must ensure that testing of the metering installation is carried out:

(1) in accordance with clause 7.9.1 and this Schedule 7.6; or

(2) in accordance with an asset management strategy that defines an alternative testing practice (other than time based) determined by the Metering Coordinator and approved by AEMO.

Where testing is carried out in accordance with Schedule 7.6, table S7.6.1.2 and table S7.6.1.3 of Schedule 7.6 of the NER set out the periods between tests and the period between inspections.

However, for whole current metering installations the testing and inspection requirements must be in accordance with an asset management strategy. An asset management strategy for whole current meters may still propose a time based testing and inspection practice.

Guidelines for the development of the asset management strategy for whole current meters have been included in section 8 of Metrology Procedure Part A.

For the avoidance of doubt, this position paper does not form part of the Metrology Procedures or the Guidelines for the development asset management strategies for whole current meters.

Under clause S7.6.2(f) of the NER, a typical inspection may include:

(1) check the seals;

(2) compare the pulse counts;

(3) compare the direct readings of meters;

(4) verify meter parameters and physical connections; and

(5) current transformer ratios by comparison.

Asset management strategies must meet the intent of Schedule 7.6.

For an alternative practice in an asset management strategy to meet the intent of Schedule 7.6 and to be approved, the applicant MC must demonstrate that their proposals are:

- Equal, or superior to the current arrangements set in clause S7.6 of the NER
- Verifiable and auditable, with traceable results and record keeping
- Assessed and reported on at regular intervals to provide all parties confidence of ongoing suitability and applicability

For inspection of metering installations, the intent of Schedule 7.6 for an inspection is:

- a physical site visit to confirm compliance of the metering installation
- a practice of inspecting meters when tested only applies if testing of meters is time based.

1.3 Testing and inspection requirements

Table S7.6.1.2 and Table S7.6.1.3 of the NER set out the periods between tests and the period between inspections.

However, Table S7.6.1.2 provides that for whole current meters the testing and inspection requirements must be in accordance with an asset management strategy.

As a result, it is AEMO's view that all Metering Coordinators with whole current meters must have an asset management strategy for testing and inspection of whole current meters.

However, an asset management strategy for whole current meters may still propose a time based testing and inspection practice.

2. Alternative Practices

2.1 Testing

AEMO will consider asset management strategies for whole current meters with testing practices that are time based and testing practices that are not time based.

Section 8(b) of Metrology Procedure Part A states that an acceptable alternative testing practice or test plan for in-service meter performance must demonstrate compliance with Australian Standard "AS 1284.13: Electricity Metering in-service compliance testing"

Therefore, AEMO will consider a sample based testing practice for whole current meters provided that testing practice complies with Australian Standard AS 1284.13.

2.2 Inspections

Table S7.6.1.2 of the NER provides that for whole current meters the testing and inspection requirements must be in accordance with an asset management strategy.

Therefore, an asset management strategy for whole current meters must include both testing and inspection.

AEMO will consider asset management strategies for whole current meters with inspection practices that are time based and inspection practices that are not time based.

Clause S7.6.2(f) of the NER sets out what a typical inspection may include.

Traditionally a typical inspection would result in a physical site visit to conduct an inspection of the metering installation to confirm:

- the integrity of the calibrated measurement equipment at the installation
- that electrical connections are sound and not tampered with
- that measurement devices are recording accurately
- that seals, labels and notices are in place

Modern advanced metering systems and VIC AMI systems provide functionality that might be leveraged by MCs to assist in meeting the requirements of the Rules such as clause 7.3.2(e)(1), (2) and (3). For example, MCs might have processes to monitor and act on reports of meter alarms, obtained via remote acquisition of data. If well managed and controlled, a remote monitoring process has the capability to identify and then rectify some issues far sooner than a periodic physical inspection would have, provided that actions are taken once issues are identified remotely.

AEMO expects that MCs will include information on how they leverage their advanced metering system's capability in an asset management strategy, in support of a proposed testing or inspection strategy. This must be articulated in detail to explain how this capability supports the testing and inspection strategy. However, remote monitoring is not an adequate replacement for a physical site inspection as it cannot provide assurance for all matters required in an inspection that would meet the intent of Schedule 7.6. Therefore, AEMO does not consider an inspection practice based solely on remote monitoring will meet the intent of Schedule 7.6.