

## **Draft National Electricity Amendment (Provision of Metering Data Services and Clarification of Existing Metrology Requirements) Rule 2010**

under the National Electricity Law as applied by:

- (a) the National Electricity (South Australia) Act 1996;
- (b) the Electricity (National Scheme) Act 1997 of the Australian Capital Territory;
- (c) the Electricity - National Scheme (Queensland) Act 1997 of Queensland;
- (d) the Electricity - National Scheme (Tasmania) Act 1999 of Tasmania;
- (e) the National Electricity (New South Wales) Act 1997 of New South Wales;
- (f) the National Electricity (Victoria) Act 2005 of Victoria; and
- (g) the Australian Energy Market Act 2004 of the Commonwealth.

The Australian Energy Market Commission makes the following Rule under the National Electricity Law.

John Tamblyn  
Chairman  
Australian Energy Market Commission

## **Draft National Electricity Amendment (Provision of Metering Data Services and Clarification of Existing Metrology Requirements) Rule 2010**

### **1 Title of Rule**

This Rule is the *Draft National Electricity Amendment (Provision of Metering Data Services and Clarification of Existing Metrology Requirements) Rule 2010*.

### **2 Commencement**

This Rule commences operation on [insert date].

### **3 Amendment of the National Electricity Rules**

The National Electricity Rules are amended as set out in Schedule 1.

### **4 Amendment of the National Electricity Rules**

The National Electricity Rules are amended as set out in Schedule 2.

### **5 Amendment of the National Electricity Rules**

The National Electricity Rules are amended as set out in Schedule 3.

### **6 Amendment of the National Electricity Rules**

The National Electricity Rules are amended as set out in Schedule 4.

## **Schedule 1      Amendments of the National Electricity Rules**

(Clause 3)

### **[1] References to "Metering Providers" in various clauses**

In clauses 7.1.1(a), 7.2.8(c), 7.2A.4(h), 7.14.3(a)(1)(v) and 7.14.3(a)(4)(i) , after "*Metering Providers*" insert "and *Metering Data Providers*".

### **[2] References to "revenue" in various clauses**

In clauses 7.1.1(b)(1), 7.3.2(a)(1), 7.3.2(a)(2), 7.3.4(b), 7.5.1(a) and 7.5.2(a), omit "*revenue*" wherever occurring.

### **[3] Clause 7.1.1      Purpose**

In clause 7.1.1(b)(3), omit "and servicing of *data collection systems*" and substitute "of *metering data services*".

### **[4] Clause 7.1.1      Purpose**

Omit clause 7.1.1(b)(8) and substitute:

- (8) *metering data services database* and the *metering database*, the latter including *metering register* requirements.

### **[5] New clause 7.1.3 Obligation to establish, maintain and publish procedures**

After clause 7.1.2(b), insert:

#### **7.1.3      Obligation to establish, maintain and publish procedures**

- (a) *AEMO* is responsible for the establishment and maintenance of procedures (including documents such as guidelines) specified in Chapter 7 except for procedures established and maintained under Rule 7.2A.
- (b) The procedures authorised by *AEMO* must be established and maintained by *AEMO* in accordance with the *Rules consultation procedures*.
- (c) The *Information Exchange Committee* is responsible for the establishment and maintenance of procedures specified in Rule 7.2A.
- (d) The procedures authorised by the *Information Exchange Committee* must be established and maintained in accordance with the requirements of Rule 7.2A.

- (e) *AEMO* must publish a list of procedures authorised under the *Rules* relevant to this Chapter 7, irrespective of who authorised those procedures.

## **[6] Rule 7.2                      Responsibility for Metering Installation**

In the Rule 7.2 heading, after "Metering Installation" insert ", Metering Data and Market Settlement and Transfer Solution Procedures".

## **[7] Clause 7.2.1              Responsible person**

In the heading, omit "Responsible person" and substitute "Responsibility of the responsible person".

## **[8] Clause 7.2.1              Responsible person**

Omit clause 7.2.1 and substitute:

- (a) The *responsible person* is the person responsible for the provision, installation and maintenance of a *metering installation* in accordance with this Chapter 7, the *metrology procedure* and procedures authorised under the *Rules*.
- (b) *AEMO* must establish guidelines in relation to the role of the *responsible person* consistent with this Chapter 7.

## **[9] Clause 7.2.2              Responsibility of the Market Participant**

After clause 7.2.2(b)(2), insert:

- (c) A *Market Participant* is responsible for engaging a *Metering Data Provider* and providing *metering data services* in relation to each type 1, 2, 3 or 4 *metering installation* for which it is the *financially responsible Market Participant* unless it receives and accepts an offer from the *Local Network Service Provider* to be responsible for providing *metering data services* for the relevant *metering installation*.
- (d) The *Market Participant* must for each type 1, 2, 3 or 4 *metering installation* for which it is the *financially responsible Market Participant*:
  - (1) ensure that *metering data services* are provided in accordance with the *Rules*, the *metrology procedure* and procedures authorised under the *Rules*; and
  - (2) arrange for the provision of relevant *metering data* to *AEMO* if *remote acquisition*, if any, becomes unavailable.

- (e) *AEMO* must establish guidelines in relation to the role of the *financially responsible Market Participant* consistent with this Chapter 7.

**[10] Clause 7.2.3 Responsibility of the Local Network Service Provider**

In clause 7.2.3(c)(1), omit "and" where last occurring.

**[11] Clause 7.2.3 Responsibility of the Local Network Service Provider**

Omit clause 7.2.3(c)(2) and substitute:

- (2) provide the *Market Participant* with the name of the *Metering Provider* that would be engaged under clause 7.2.5(a); and
- (3) provide the *Market Participant* with the terms and conditions relating to the offer to provide that service under clause 7.2.1(a),

**[12] Clause 7.2.3 Responsibility of the Local Network Service Provider**

After clause 7.2.3(i), insert:

- (j) The *Local Network Service Provider* is responsible for engaging a *Metering Data Provider* and providing *metering data services* in relation to each type 5, 6 or 7 *metering installation*.
- (k) The *Local Network Service Provider* must for each type 5, 6 or 7 *metering installation*:
  - (1) ensure that *metering data services* are provided in accordance with the *Rules*, the *metrology procedure* and procedures authorised under the *Rules*;
  - (2) ensure for any type 5 *metering installation* where the annual flow of electricity through the *connection point* is greater than the *type 5 accumulation boundary*, that *interval energy data* is collected; and
  - (3) arrange for the provision of relevant *metering data* to *AEMO* if *remote acquisition*, if any, becomes unavailable
- (l) *AEMO* must establish guidelines in relation to the role of the *Local Network Service Provider* consistent with this Chapter 7.

**[13] Clause 7.2.5 Role of the responsible person**

In clauses 7.2.5(a)(1), 7.2.5(b)(1) and 7.2.5(c), after "*Metering Provider*" insert "or *Metering Providers*".

**[14] Clause 7.2.5 Role of the responsible person**

In clause 7.2.5(d)(1), omit "*metrology procedure*" and substitute "*Rules*, the *metrology procedure* and procedures authorised under the *Rules*".

**[15] Clause 7.2.5 Role of the responsible person**

In clause 7.2.5(d)(2), omit "and the *metrology procedure*" and substitute ", the *metrology procedure* and procedures authorised under the *Rules*".

**[16] Clause 7.2.5 Role of the responsible person**

In clause 7.2.5(d)(3), omit "provide and maintain the security control of the installation" and substitute "ensure that the security control of the installation is provided".

**[17] Clause 7.2.5 Role of the responsible person**

Omit clause 7.2.5(d)(4) and substitute:

- (4) where *remote acquisition* is used or is to be used for the collection of *metering data* ensure that a *communications interface* is installed and maintained to facilitate connection to the *telecommunications network*;

**[18] Clause 7.2.5 Role of the responsible person**

Omit clause 7.2.5(d)(5), 7.2.5(d)(8) and 7.2.5(f) and substitute "[Deleted]" in each case.

**[19] Clause 7.2.5 Role of the responsible person**

In clause 7.2.5(d)(6), omit "provide to *AEMO* (when requested)," and substitute "ensure that *AEMO* is provided (when requested) with".

**[20] Clause 7.2.5 Role of the responsible person**

In clause 7.2.5(d)(7), after ";" insert "and".

**[21] References to "and Metering Providers" in various clauses**

In clauses 7.2.8(d) and 7.2A.4(i), omit "and *Metering Providers*" and substitute ", *Metering Providers* and *Metering Data Providers*".

**[22] Clause 7.2.8      Market Settlement and Transfer Solution Procedures**

In clauses 7.2.8(e) and 7.2.8(f), omit "or *Metering Provider*" whenever occurring.

**[23] New Rule 7.2A      B2B Arrangements**

After clause 7.2.8, insert a new Rule heading:

**7.2A      B2B Arrangements**

**[24] Clause 7.3.1      Metering installation components**

In clause 7.3.1(a), after "*metering installation*" insert "unless it is classified as an *unmetered connection point* in accordance with schedule 7.2".

**[25] Clause 7.3.1      Metering installation components**

In clause 7.3.1(a)(1), omit "or, be classified as an *unmetered connection point* in accordance with schedule 7.2 and in which case such a device is not required".

**[26] Clause 7.3.1      Metering installation components**

Omit clauses 7.3.1(a)(3), 7.3.1(a)(9), 7.3.1(a)(12), 7.3.1(a)(13), 7.3.1(b)(4), 7.3.1(b)(5), 7.3.1(b)(7), 7.3.1(b)(8) and 7.3.1(b)(9) and substitute "[**Deleted**]" in each case.

**[27] Clause 7.3.1      Metering installation components**

Omit clause 7.3.1(a)(4) and substitute:

- (4) include a *communications interface* to meet the requirements of clause 7.2.5(d)(4);

**[28] Clause 7.3.1      Metering installation components**

Omit clauses 7.3.1(a)(6), including the note, 7.3.1(a)(7) and 7.3.1(a)(8) and substitute:

- (6) record *energy data* in a manner that enables *metering data* to be collated in accordance with clause 7.11.5;
- (7) be capable of separately recording *energy data* for energy flows in each direction where bi-directional *active energy* flows occur;
- (8) have a *measurement element* for *active energy* and if required in accordance with schedule 7.2 a *measurement element* for *reactive energy*, both of which are recorded;

**[29] Clause 7.3.1 Metering installation components**

Omit clause 7.3.1(a)(10) and 7.3.1(a)(11) and substitute:

- (10) include facilities for storing *interval energy data* for a period of at least 35 *days* if the *metering installation* is registered as a type 1, 2, 3 or 4 *metering installation*;
- (11) include facilities for storing *interval energy data* for a period of at least 200 *days* or such other period as specified in the *metrology procedure* if the *metering installation* is registered as a type 5 *metering installation*; and

**[30] Clause 7.3.1 Metering installation components**

Omit clause 7.3.1(g) and substitute:

- (g) Where a *metering installation* is used for purposes in addition to the provision of *metering data* to AEMO and persons eligible to receive *metering data* under clause 7.7, then the *Responsible Person* when agreeing to any additional purpose(s) under paragraph (c) must use reasonable endeavours to ensure that:

**[31] Clause 7.3.1 Metering installation components**

In clause 7.3.1(i)(5), omit "*metering equipment*" and substitute "*metering equipment*".

**[32] Clause 7.3.3 Use of metering data**

Omit clause 7.3.3 in its entirety, including the heading, and substitute "[Deleted]".

**[33] Clause 7.3.4 Metering installation types and accuracy**

Omit the heading and substitute "Metering installation types, accuracy and meter churn".

**[34] Clause 7.3.5 Data collection system**

Omit clause 7.3.5 in its entirety, including the heading, and substitute "[Deleted]".

**[35] Clause 7.3.6 Payment for metering**

Omit clause 7.3.6 in its entirety, including the heading, and substitute "[Deleted]".

**[36] New Clause 7.3.7 Meter installation malfunctions**

After clause 7.3.6, insert:

### **7.3.7 Meter installation malfunctions**

- (a) Unless an exemption is obtained by the *responsible person* from *AEMO* under this clause 7.3.7, the *responsible person* must in respect of a *connection point* with:
  - (1) a type 1, 2 and 3 *metering installation*, if a *metering installation malfunction* occurs to the *metering installation*, cause repairs to be made to it as soon as practicable but no later than 2 *business days* after the *responsible person* has been notified of the *metering installation malfunction*; or
  - (2) a *metering installation* other than the installations referred to in subparagraph (1), if a *metering installation malfunction* occurs to the *metering installation*, cause repairs to be made to it as soon as practicable but no later than 10 *business days* after the *responsible person* has been notified of the *metering installation malfunction*.
- (b) *AEMO* must establish and *publish* a procedure applicable to the provision of exemptions for the purpose of paragraph (a) and *AEMO* may revise the procedure from time to time.
- (c) If an exemption is provided by *AEMO* under this clause 7.3.7 then the *Metering Provider* must provide *AEMO* with a plan for the rectification of the *metering installation*.
- (d) A *Registered Participant*, *Metering Provider* or *Metering Data Provider* who becomes aware of a *metering installation malfunction* of a *metering installation* must notify the *responsible person* of the *metering installation malfunction* within 1 *business day*.

### **[37] New Rule 7.3A Payment for Metering Provision and Metering Data Services**

After clause 7.3.7, insert:

#### **7.3A Payment for Metering Provision and Metering Data Services**

- (a) Subject to paragraph (b), the *financially responsible Market Participant* is responsible for payment of all costs associated with:
  - (1) the provision, installation, maintenance, routine testing and inspection of the *metering installation*;
  - (2) the provision of *metering data services*;
  - (3) the cost of preparing *settlements ready data* where such costs will not be recovered by *AEMO* in accordance with paragraph (c);

- (4) the cost of additions and enhancements to *metering installations* undertaken in accordance with clause 7.3.1(c); and
  - (5) the cost of additional data services that exceed the minimum requirements in accordance with clause 7.11.2(b).
- (b) If a *responsible person* allows another person to engage a *Metering Provider* to install a *metering installation* in accordance with clause 7.2.5(a)(2), the *financially responsible Market Participant* is not responsible for the payment of the costs of installation of the relevant *metering installation* under paragraph (a).
- (c) When *AEMO* is required to undertake functions associated with a *metering installation* in accordance with the requirements of the *metrology procedure* (which could include the preparation and application of a profile), *AEMO's* cost is to be recovered through *Participant fees* in accordance with a budget prepared under clause 2.11.3(b)(3) unless the *metrology procedure* specifies an alternative method of cost recovery, in which case *AEMO* must not recover the costs through *Participant fees*.
- (d) Subject to paragraph (a), any costs incurred in gaining access to *metering data* must be paid by the party who accessed the *metering data*.
- (e) The cost of requisition testing and audits must be paid by the party requesting the test or audit, except where the *metering installation* is shown not to comply with this Chapter 7, in which case the *responsible person* in relation to that *metering installation* must bear the cost.
- (f) Paragraph (a) does not apply to the recovery of costs by a *Local Network Service Provider* that are associated with type 5, 6 or 7 *metering installations*, to the extent that these costs can be recovered by the *Local Network Service Provider* in accordance with a determination made by the *AER*.
- (g) Where:
  - (1) a *financially responsible Market Participant* alters a type 5, 6 or 7 *metering installation* under clause 7.3.4 that leads to a change in the classification of that *metering installation*; and
  - (2) the *Local Network Service Provider* is no longer the *responsible person* for that *metering installation*,

the parties must negotiate in good faith to ensure the *Local Network Service Provider* is reasonably compensated for the alteration to the *metering installation*.

**[38] Rule 7.4 Metering Providers**

In the Rule 7.4 heading, after "Metering Providers" insert "and Metering Data Providers".

**[39] Clause 7.4.1 Responsibility**

Omit the heading and substitute "Role of Metering Providers".

**[40] Clause 7.4.1 Responsibility**

In clause 7.4.1(b), omit "is responsible for providing and maintaining" and substitute "must provide and maintain".

**[41] New Clause 7.4.1A Role of Metering Data Providers**

After clause 7.4.1, insert:

**7.4.1A Role of Metering Data Providers**

- (a) The provision of *metering data services* must be carried out only by a *Metering Data Provider*.
- (b) A *Metering Data Provider* must provide and maintain the security controls associated with *metering data services* in accordance with clause 7.8.2.

**[42] Clause 7.4.2 Qualifications and registration of Metering Providers**

In clause 7.4.2(bb), omit "and of procedures authorised under the *Rules*, and with any requirements established by *AEMO* under clause 7.4.2(bc)" and substitute ", procedures authorised under the *Rules*, the guidelines published in accordance with paragraph (ba), and with the requirements established by *AEMO* under paragraph (bc)".

**[43] Clause 7.4.2 Qualifications and registration of Metering Providers**

Omit clause 7.4.2(bc) in its entirety and substitute:

- (bc) The requirements referred to in paragraph (bb) must be included in the guidelines established under paragraph (ba) and may include, among other things, requirements relating to cooperation with *AEMO* and any person engaged by *AEMO* to operate any relevant *agency metering database*, the confidentiality of information collected by *Metering Providers*, the resolution of disputes between *AEMO* and *Metering Providers*, the access of *AEMO* to and the inspection and audit by *AEMO* of any equipment or database maintained by *Metering Providers*, the insurance which must be taken out by or on behalf of *Metering Providers*, subcontracting by

*Metering Providers*, the software and systems that are used by *Metering Providers*, maintenance of quality systems accreditation, the ownership of intellectual property that is developed or used by *Metering Providers*, and the delivery up to *AEMO* of data, works, material and other property that *AEMO* has the right to in the event of the deregistration of a *Metering Provider*.

#### **[44] Clause 7.4.2      Qualifications and registration of Metering Providers**

In clause 7.4.2(c), omit "*metering services*" and substitute "services related to *metering*".

#### **[45] New Clause 7.4.2A      Qualifications and registration of Metering Data Providers**

After clause 7.4.2, insert:

##### **7.4.2A      Qualifications and registration of Metering Data Providers**

- (a) A *Metering Data Provider* is a person who:
  - (1) meets the requirements set out in schedule 7.6; and
  - (2) is accredited by and registered by *AEMO* in that capacity in accordance with the qualification process established under clause S7.6.1(b).
- (b) Any person may apply to *AEMO* for accreditation and registration as a *Metering Data Provider*
- (c) *Network Service Providers* must either register as a *Metering Data Provider* or enter into agreements with *Metering Data Providers* for the provision of *metering data services*.
- (d) *AEMO* must, in accordance with *Rules consultation procedures*, prepare and publish guidelines in respect of the accreditation of *Metering Data Providers*. The adoption of the guidelines by *Metering Data Providers* is to be included in the qualification process in accordance with clause S7.6.1(b). The guidelines must include a dispute resolution process.
- (e) A *Metering Data Provider* must comply with the provisions of the *Rules*, procedures authorised under the *Rules*, and the guidelines published in accordance with paragraph (d) and with the requirements established by *AEMO* under paragraph (d), that are expressed to apply to *Metering Data Providers*.
- (f) The requirements referred to in paragraph (e) must be included in the guidelines established under paragraph (d) and may include,

among other things, requirements relating to cooperation with *AEMO* and any person engaged by *AEMO* to operate any relevant *agency metering database*, the confidentiality of information collected by *Metering Data Providers*, the resolution of disputes between *AEMO* and *Metering Data Providers*, the access of *AEMO* to and the inspection and audit by *AEMO* of any equipment or database maintained by *Metering Data Providers*, the insurance which must be taken out by or on behalf of *Metering Data Providers*, subcontracting by *Metering Data Providers*, the software and systems that are used by *Metering Data Providers*, maintenance of quality systems accreditation, the ownership of intellectual property that is developed or used by *Metering Data Providers*, and the delivery up to *AEMO* of data, works, material and other property that *AEMO* has the right to in the event of the deregistration of a *Metering Data Provider*.

- (g) A *Market Generator* or *Market Customer* which is involved in the trading of *energy* must not be registered as a *Metering Data Provider* for *connection points* in respect of which the *metering data* relates to its own use of *energy*.
- (h) If a *Market Participant* is a *Market Customer* and also a *Network Service Provider* then the *Market Participant* may be registered as a *Metering Data Provider* for that *connection point* as specified in clause 7.4.2A(g).

### **[46] Clause 7.4.3 Deregistration of Metering Providers**

In the heading, after "Metering Providers" insert "and Metering Data Providers".

### **[47] Clause 7.4.3 Deregistration of Metering Providers**

Omit clauses 7.4.3(a) to 7.4.3(c) and substitute:

- (a) *AEMO* must establish a procedure in accordance with the *Rules consultation procedures* for deregistration of *Metering Providers* and *Metering Data Providers*.
- (aa) **[Deleted]**
- (b) If *AEMO* reasonably determines that a *Metering Provider* or a *Metering Data Provider* has breached the provisions of the *Rules* or of procedures authorised under the *Rules* that applies to *Metering Providers* or *Metering Data Providers* then:
  - (1) *AEMO* must send to that *Metering Provider* or *Metering Data Provider* a notice in writing setting out the nature of the breach; and
  - (2) *AEMO* must, if the *Metering Provider* or *Metering Data Provider* remains in breach for a period of more than 7 days

after notice in accordance with subparagraph (1), conduct a review to assess the *Metering Provider's* or *Metering Data Provider's* capability for ongoing compliance with the *Rules* or procedures authorised under the *Rules*.

- (c) *AEMO* may, following a review conducted under paragraph (b) and in accordance with the procedure under paragraph (a), deregister the *Metering Provider* or *Metering Data Provider*, suspend the provider from some categories of registration or allow the provider to continue to operate under constraints agreed with *AEMO*.

#### **[48] Clause 7.4.3 Deregistration of Metering Providers and Metering Data Providers**

After clause 7.4.3(c), insert:

- (d) If following a review under paragraph (c), *AEMO* deregisters or suspends from some categories of registration or allows the *Metering Provider* or *Metering Data Provider* to continue to operate under constraints, then *AEMO* must inform the relevant *responsible person(s)*, the relevant *financially responsible Market Participant* and the relevant *Local Network Service Provider* of the outcome of that review.

#### **[49] Clause 7.6.3 Audits of metering**

Omit the heading "Audits of metering" and substitute "Audits of information held in metering installation".

#### **[50] Clause 7.6.3 Audits of metering**

Omit clause 7.6.3(a) and substitute:

- (a) A *Registered Participant* may request *AEMO* to conduct an audit to determine the consistency between the data held in the *metering database* and the data held in the relevant *metering installation*.

#### **[51] Clause 7.6.3 Audits of metering**

Omit clause 7.6.3(d) and substitute:

- (d) *AEMO* must carry out periodic random audits of *metering installations* to confirm compliance with the *Rules* and must be given unrestrained access by *responsible persons* to *metering installations* for the purpose of carrying out such random audits where *AEMO* agrees to comply with the *responsible person's* reasonable security and safety requirements and has first given the *responsible person* at least two *business days'* notice of its intention to carry out an audit, which notice must include:

**[52] Rule 7.7 Entitlement to metering data**

In the Rule 7.7 heading, after "metering data" insert "and access to metering installation".

**[53] Rule 7.7 Entitlement to metering data**

In rule 7.7(a), omit "The only persons entitled to receive *metering data, NMI Standing Data*" and substitute "The only persons entitled to access *energy data* or to receive *metering data, NMI Standing Data, settlements ready data*".

**[54] Rule 7.7 Entitlement to metering data**

In rule 7.7(a)(7), omit "and".

**[55] Rule 7.7 Entitlement to metering data**

In rule 7.7(a)(8), omit "." and insert:

; and

- (9) *Metering Data Providers* who have been engaged to provide *metering data services* for that *metering installation* or in accordance with clause 7.14.1A(c)(6).

**[56] Rule 7.7 Entitlement to metering data**

Omit rules 7.7(b) and 7.7(c) and substitute:

- (b) Electronic access to *energy data* recorded by a *metering installation* by persons referred to in paragraph (a) must only be provided where passwords in accordance with clause 7.8.2 are allocated, otherwise access shall be to *metering data* from the *metering data services database* or the *metering database*.
- (c) The *responsible person* must ensure that access is provided to *metering data* from the *metering data services database* to persons eligible to receive *metering data* in accordance with paragraph (a).

**[57] Rule 7.7 Entitlement to metering data**

After rule 7.7(c), insert:

- (c1) The *Metering Data Provider* must provide access to *metering data* from the *metering data services database* to persons eligible to receive *metering data* in accordance with paragraph (a).

**[58] Rule 7.7 Entitlement to metering data**

After rule 7.7(f), insert:

- (g) The *Metering Provider* must provide electronic access to the *metering installation* to facilitate the requirements of paragraph (b) and electronic or physical access, as the case may be, to the *metering installation* to facilitate the requirements of rule 7.12(f).

**[59] Clause 7.8.1 Security of metering installations**

In clause 7.8.1(c), omit "or *Metering Provider*" and substitute "*Metering Provider*, or *Metering Data Provider*".

**[60] Clause 7.8.1 Security of metering installations**

In clause 7.8.1(e)(2), omit "or".

**[61] Clause 7.8.1 Security of metering installations**

In clause 7.8.1(e)(3), omit "," and substitute:

; or

- (4) by the *Metering Data Provider* if the seal was broken by the *Metering Data Provider*,

**[62] Clause 7.8.2 Security controls**

In clause 7.8.2(a), omit "*metering data*" and substitute "*energy data*".

**[63] Clause 7.8.2 Security controls**

In clause 7.8.2(a), omit "clause 7.8.2(c)" and substitute "paragraph (c)".

**[64] Clause 7.8.2 Security controls**

Omit clause 7.8.2(c) and substitute:

- (c) The *Metering Provider* must only allocate 'read-only' passwords to *Market Participants* and *Local Network Service Providers*. For the avoidance of doubt, a *financially responsible Market Participant* may allocate that 'read-only' password to a customer who has sought access to its *energy data* or *metering data* in accordance with rule 7.7(a)(7).

**[65] Clause 7.8.2 Security controls**

In clause 7.8.2(e), after "*AEMO*" insert "on request by *AEMO*".

**[66] Clause 7.8.2 Security controls**

Omit clause 7.8.2(f) and substitute "[Deleted]".

**[67] Clause 7.8.2 Security controls**

After clause 7.8.2(h), insert:

- (i) The *Metering Provider* must allocate suitable passwords to the *Metering Data Provider* that enables the *Metering Data Provider* to collect the *metering data* and to maintain the clock of the *metering installation* in accordance with clause 7.12.
- (j) The *Metering Data Provider* must keep all *metering installation* passwords secure and not make the passwords available to any other person.

**[68] Clause 7.8.3 Changes to metering equipment, parameters and settings**

In the heading, after "settings" insert "within a metering installation".

**[69] Clause 7.8.4 Changes to metering data**

In the heading, after "Changes to" insert "energy data or to".

**[70] Clause 7.8.4 Changes to metering data**

In clause 7.8.4(a), omit "original stored *energy data* in a *meter*" and substitute "*energy data* held by a *metering installation*".

**[71] Clause 7.8.4 Changes to metering data**

In clause 7.8.4(b), after "to ensure that the *metering data* in the" insert "*metering data services database* and the".

**[72] Clause 7.8.4 Changes to metering data**

Omit clause 7.8.4(c) and substitute:

- (c) If a *responsible person* considers alterations are necessary under paragraph (b)(2), the *responsible person* must:
  - (1) notify *AEMO* that alteration to the *metering data* is necessary; and
  - (2) advise the *financially responsible Market Participant* of the need to change the *metering data*, and the *financially responsible Market Participant* must arrange for the *Metering Data Provider* to:

- (i) alter the *metering data* for the *connection point* held in the *metering data services database* in accordance with the validation, substitution and estimation procedures in the *metrology procedure*;
- (ii) submit the altered *metering data* to the *Registered Participants* and the *Network Service Provider* who are entitled to the data in accordance with rule 7.7 and *AEMO*.

**[73] Clause 7.9.1 Metering databases**

Omit clauses 7.9.1(b), 7.9.1(b1) and 7.9.1(f) and substitute "[Deleted]" in each case.

**[74] Clause 7.9.1 Metering databases**

In clause 7.9.1(d), omit "original *energy* readings and, where relevant, *metering data* and *settlements ready data*" and substitute "*metering data*, *settlements ready data*, and information for each *metering installation* registered with *AEMO* in accordance with rule 7.5".

**[75] Clause 7.9.1 Metering databases**

After clause 7.9.1(g), insert:

- (h) The *settlements ready data* held in the *metering database* must be used by *AEMO* for *settlements* purposes.
- (i) The *settlements ready data* held in the *metering database* may be used by *Distribution Network Service Providers* for the purpose of determining *distribution service charges* in accordance with clause 6.20.1.
- (j) *AEMO* must retain *settlements ready data* for all *metering installations* for a period of 7 years.

**[76] Clause 7.9.2 Remote acquisition of data**

Omit clause 7.9.2 in its entirety, including the heading, and substitute "[Deleted]".

**[77] Clause 7.9.3 Periodic energy metering**

Omit clause 7.9.3 in its entirety, including the heading, and substitute "[Deleted]".

**[78] Clause 7.9.4 Data validation, substitution and estimation**

Omit clauses 7.9.4(a), 7.9.4(b) and 7.9.4(c) and substitute "[Deleted]" in each case.

**[79] Clause 7.9.4 Data validation, substitution and estimation**

Omit clauses 7.9.4(d) and 7.9.4(e) and substitute:

- (d) If *AEMO* in the preparation of *settlements ready data* detects *metering data* that fails validation *AEMO* must notify the *Metering Data Provider* within 24 hours of detection.
- (e) Where a *Metering Data Provider* receives notification under paragraph (d), the *Metering Data Provider* must provide corrected *metering data* to *AEMO* within 24 hours or advise *AEMO* that this time limit can not be achieved, and the reason for delay, in which case the parties must agree on a revised time limit by which the corrected *metering data* will be provided.

**[80] Clause 7.9.4 Data validation, substitution and estimation**

After clause 7.9.4(e), insert:

- (f) Where *metering data* fails validation by *AEMO* in the preparation of *settlements ready data* and *metering data* is not available within the time required for *settlements* then *AEMO* must prepare a substitute value in accordance with the *metrology procedure*.

**[81] Clause 7.9.5 Errors found in metering tests, inspections or audits**

Omit clause 7.9.5(c) and substitute:

- (c) If any substitution is required under paragraph (b), *AEMO* must request the *financially responsible Market Participant* to arrange for a suitable substitution of the incorrect *metering data* to be undertaken in accordance with the recommendations of any audit report provided by *AEMO* (under clauses 7.6.1(j), 7.6.3(a) and 7.6.3(d)), or if no audit report is provided, in accordance with the substitution requirements of the *metrology procedure*.

**[82] Rule 7.10 Confidentiality**

In rule 7.10, omit "*Metering data* and passwords are confidential data" and substitute "*Energy data, metering data, NMI Standing Data*, information in the *metering register* and passwords are confidential".

**[83] Rule 7.11 Performance of Metering Installation**

Omit the Rule 7.11 heading and substitute "Metering Data Arrangements".

**[84] Clause 7.11.1 Metering data**

Omit clause 7.11.1(a) and substitute:

- (a) In accordance with paragraphs (b) and (c), *AEMO* requires delivery of *interval metering data* for all *trading intervals* where the *metering installation* has interval data capability and has the capability for *remote acquisition* of this data.

**[85] Clause 7.11.1 Metering data**

In clause 7.11.1(b), omit "or as otherwise agreed between *AEMO* and the *responsible person*".

**[86] References to "metering data" in various clauses**

In clauses 7.11.1(b) and 7.11.1(c), omit "*metering data*" wherever occurring and substitute "*interval metering data*".

**[87] Clause 7.11.1 Metering data**

Omit clauses 7.11.1(b)(1) to 7.11.1(b)(4) and substitute:

- (1) derived from a *metering installation* compliant at the level of accuracy for *metering installations* prescribed in schedule 7.2;
- (2) within the timeframe required for *settlements* and *prudential requirements* specified in the *metrology procedure*, and the relevant *service level procedures*;
- (3) actual or substituted in accordance with the *metrology procedure*; and
- (4) in accordance with the performance standards specified in the *metrology procedure*.

**[89] Clause 7.11.1 Metering data**

In clauses 7.11.1(c)(1) and 7.11.1(d)(1), omit "at the level of accuracy" and substitute "derived from a *metering installation* compliant with the relevant level of accuracy for *metering installations*".

**[90] Clause 7.11.1 Metering data**

In clauses 7.11.1(c)(2) and 7.11.1(d)(2), after "*metrology procedure*" insert "and the relevant *service level procedures*".

**[91] Clause 7.11.1 Metering data**

In clause 7.11.1(c)(3), omit "procedures established by *AEMO* under clause 7.14.1(c)(6)" and substitute "standards related to performance requirements as specified in the *metrology procedure*".

**[92] Clause 7.11.1 Metering data**

In clause 7.11.1(d), omit "is required" and substitute "must be".

**[93] Clause 7.11.1 Metering data**

In clause 7.11.1(d)(3), omit "procedures established by *AEMO* under clause 7.14.1(c)(6)" and substitute "*metrology procedure*".

**[94] Clause 7.11.1 Metering data**

After clause 7.11.1(d), insert:

- (e) Despite anything to the contrary in the *Rules*, *AEMO* may obtain *metering data* directly from a *metering installation* for the *settlement* process.

**[95] Clause 7.11.2 Metering installation malfunctions**

Omit the heading and substitute "Metering Data Services".

**[96] Clause 7.11.2 Metering installation malfunctions**

Omit clauses 7.11.2(a) to 7.11.2(d) and substitute:

- (a) *Metering Data Providers* must provide *metering data services* in accordance with the *Rules* and procedures authorised under the *Rules*, including:
  - (1) collecting *metering data* by manual reading or by *remote acquisition*;
  - (2) the validation and substitution of *metering data* for a type 1, 2, 3 and 4 *metering installation*;
  - (3) the validation, substitution and estimation of *metering data* for a type 5 and 6 *metering installation*;
  - (4) the calculation, estimation and substitution of *metering data* for a type 7 *metering installation*;
  - (5) establishing and maintaining a *metering data services database* associated with each *metering installation*;

- (6) providing *metering data*, *NMI Standing Data* or information from the *metering register* for a *metering installation* to persons entitled to receive data in accordance with rule 7.7;
  - (7) the delivery of *metering data* and relevant *NMI Standing Data* for a *metering installation* to persons entitled to receive data in accordance with rule 7.7;
  - (8) ensuring the *metering data* and other data associated with the *metering installation* is protected from direct local or remote electronic access while being collected and while held in the *metering data services database* and that data is provided only in accordance with rule 7.7;
  - (9) maintaining the standard of accuracy of the time setting of the *metering data services database* and the *metering installation* in accordance with rule 7.12;
  - (10) notifying the *responsible person* of any *metering installation malfunction* of a *metering installation* within 1 *business day*; and
  - (11) management and storage of *metering data* in accordance with clause 7.11.3.
- (b) *Metering Data Providers* may provide additional data services that exceed the minimum requirements of the *Rules*, *service level procedures* or the *metrology procedure* at the request of a relevant *Market Participant* or *Local Network Service Provider* provided that:
- (1) the full costs of this work is met by the *Market Participant* or *Local Network Service Provider*; and
  - (2) the provision of additional data services must not impact the provision of *metering data services*.
- (c) **[Deleted]**
- (d) **[Deleted]**

### **[97] New Clause 7.11.3      Data management and storage**

After clause 7.11.2, insert:

#### **7.11.3      Data management and storage**

- (a) *Metering Data Providers* must retain *metering data* for all relevant *metering installations* in the *metering data services database*:

- (1) online for 13 months in an accessible format;
  - (2) following the retention under subparagraph (1), in an accessible format for a period of 5 years and 11 months;
  - (3) the retention under subparagraph (2) is to include the *accumulated metering data* or *interval metering data* that was collected from the *metering installation*; and
  - (4) the retention is to include the records of each adjustment or substitution to the *metering data* in respect of a *metering installation* for a period of 7 years.
- (b) *Metering Data Providers* accredited for type 7 *metering installations* must maintain techniques for determining *calculated metering data* for type 7 *metering installations* that are *market loads* under schedule 7.2 in accordance with the *metrology procedure*.
  - (c) *Metering Data Providers* must maintain *electronic data transfer* facilities in order to deliver *metering data* from the *metering data services database* to the *metering database* in accordance the relevant *service level procedures*.
  - (d) *Check metering data*, where available, and appropriately adjusted for differences in *metering installation* accuracy, where applicable, must be used by the *Metering Data Provider* to validate *metering data*.
  - (e) If the *Metering Data Provider* becomes aware that the *metering data* that has been delivered into the *metering database* from a *metering data services database* is incorrect, then the *Metering Data Provider* must notify the *Market Participant*, the *Local Network Service Provider* and *AEMO* within 24 hours of detection.
  - (f) *Metering data* may only be altered by a *Metering Data Provider* except in the preparation of *settlements ready data*, in which case *AEMO* may alter the *metering data* in accordance with clause 7.9.4(d).
  - (g) A *Metering Data Provider* may only alter *metering data* in the *metering data services database* in accordance with the *metrology procedure*.
  - (h) *Metering Data Providers* must maintain electronic data transfer facilities in order to deliver *metering data* from the *metering data services database* to *Market Participants* and *Network Service Providers* who are entitled to receive *metering data*.
  - (i) The *Metering Data Provider's* rules and protocols for the collection of *metering data* from a *metering installation* must be approved by *AEMO* and *AEMO* must not unreasonably withhold such approval.

- (j) The *Metering Data Provider* must arrange with the *financially responsible Market Participant* to obtain the relevant *metering data* if *remote acquisition*, if any, becomes unavailable, and the *responsible person* must assist the *financially responsible Market Participant* in obtaining that *metering data*.

#### **7.11.4 Use of check metering data**

- (a) *Check metering data*, where available and provided that the *check metering data* has been appropriately adjusted for differences in *metering installation* accuracy, must be used by *Metering Data Providers* or *AEMO*, as the case may be, for:

- (1) validation;
- (2) substitution; and
- (3) estimation

of *metering data* as required by clauses 7.9.4(d) and 7.11.2.

#### **7.11.5 Periodic energy metering**

- (a) For type 1, 2, 3, 4 and 5 *metering installations* *metering data* relating to:

- (1) the amount of *active energy*; and
- (2) *reactive energy* (where relevant) passing through a *connection point*,

must be collated in *trading intervals* within a *metering data services database* unless it has been agreed between *AEMO*, the *Local Network Service Provider* and the *Market Participant* that *metering data* may be recorded in sub-multiples of a *trading interval*.

### **[98] Rule 7.12 Time settings**

Omit rule 7.12(a) and substitute:

- (a) The *Metering Provider* must set the times of clocks of all *metering installations* with reference to *Eastern Standard Time* and maintain the time to a standard of accuracy in accordance with schedule 7.2 relevant to the *load* through the *connection point* when installing, testing and maintaining *metering installations*.

### **[99] Rule 7.12 Time settings**

Omit rules 7.12(b) and 7.12(c) and substitute "[Deleted]" in each case.

**[100] Rule 7.12 Time settings**

In rule 7.12(d), omit "for a type 1, 2, 3 and 4 *metering installation*".

**[101] Rule 7.12 Time settings**

Omit rule 7.12(e) and substitute:

- (e) The *Metering Data Provider* must maintain the *metering data services database* clock within - 1 second and + 1 second of *Eastern Standard Time*.

**[102] Rule 7.12 Time settings**

After rule 7.12(e), insert:

- (f) The *Metering Data Provider* must:
  - (1) set the clock of the *metering installation* so that it is referenced to *Eastern Standard Time* to a standard of accuracy in accordance with schedule 7.2 relevant to the *load* through the *connection point* on each occasion that the *metering installation* is accessed;
  - (2) reset the clock of the *metering installation* so that it is maintained to the required standard of accuracy in accordance with schedule 7.2 relevant to the *load* through the *connection point* where the clock error of a *metering installation* does not conform to the required standard of accuracy on any occasion that the *metering installation* is accessed; and
  - (3) notify the *Metering Provider* where the *Metering Data Provider* is unable to reset the clock of the *metering installation* in accordance with subparagraph (2).

**[103] Rule 7.14 Metrology procedure**

Omit the Rule heading and substitute "Metrology and service level procedures".

**[104] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(1)(ii), omit "using *communication link(s)*".

**[105] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(3) omit “and *Metering Providers*” and substitute “, *financially responsible Market Participant, Local Network Service Provider, Metering Providers* and *Metering Data Providers*”.

**[106] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(4), omit "extraction or delivery of *metering data* from" and substitute "delivery of *metering data* relating to".

**[107] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6), omit "the preparation of *settlements ready data* on the following matters".

**[108] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6)(i), omit "data validation and substitution in accordance with clause 7.9.4" and substitute "the validation and substitution of *metering data* in accordance with clause 7.11.2".

**[109] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6)(ii), omit "data estimation" and substitute "the estimation of *metering data*".

**[110] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6)(iii), omit "the matters specified in clause 7.9.3,".

**[111] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6)(iii)(A), omit "into *trading interval data*" and substitute "by *AEMO into trading interval metering data*".

**[112] Clause 7.14.1 Requirements of the metrology procedure**

In clause 7.14.1(c)(6)(iii)(B), omit "*first-tier load energy data* that is necessary to enable the conversion referred to in subparagraph (1)" and substitute "*first-tier*

*load metering data* that is necessary to enable the conversion referred to in subparagraph (A)".

### **[113] Clause 7.14.1 Requirements of the metrology procedure**

After clause 7.14.1(c)(7), insert:

- (d) *Metering Providers* and *Metering Data Providers* must comply with the *metrology procedure* relevant to their category of registration.

### **[114] New clause 7.14.1A Requirements of the service level procedures**

After clause 7.14.1(d), insert:

#### **7.14.1A Requirements of the service level procedures**

- (a) *AEMO* must develop and *publish* the *service level procedures* that will apply to the relevant categories of registration in accordance with this Chapter 7 and this rule 7.14.
- (b) *AEMO* must develop and publish the first *service level procedures* in accordance with the *Rules consultation procedures* by [INSERT DATE], and there must be *service level procedures* in force at all times after that date.
- (c) The *service level procedures* must include:
  - (1) the services associated with the provision, installation and maintenance of *metering installations* by *Metering Providers*;
  - (2) requirements for the systems and processes for the collection, processing and delivery of *metering data* by *Metering Data Providers*;
  - (3) the performance levels associated with the collection, processing and delivery of *metering data*;
  - (4) the data formats that must be used for the delivery of *metering data*;
  - (5) the management of relevant *NMI Standing Data*;
  - (6) the requirements for the processing of *metering data* associated with *connection point* transfers and the alteration of *metering installations* where one or more devices are replaced ('meter churn'); and
  - (7) other matters in the Rules required to be included in the *service level procedures*.

- (d) *Metering Providers* and *Metering Data Providers* must comply with the *service level procedures* relevant to their category of registration.

**[115] Clause 7.14.2 Jurisdictional metrology material in metrology procedure**

In clause 7.14.2(b), omit the note.

**[116] Clause 7.14.2 Jurisdictional metrology material in metrology procedure**

In clause 7.14.2(h), omit "extracted or emanating from a *data logger* as *interval energy data*" and substitute "collected as *interval metering data*".

**[117] Clause 7.14.3 Additional matters**

Omit the heading and substitute "Additional Metrology Procedure Matters".

**[118] Clause 7.14.3 Additional matters**

In clause 7.14.3(a)(1)(iii), omit "*energy data services*" and substitute "*metering data services*".

**[119] Clause 7.14.3 Additional matters**

In clause 7.14.3(a)(1)(iv), omit " and *Metering Providers*" and substitute "*Metering Providers* and *Metering Data Providers*".

**[120] Clause 7.14.3 Additional matters**

Omit clause 7.14.3(a)(1)(vi), and substitute:

- (vi) the obligations of *responsible persons*, financially responsible Market Participants, Local Network Service Providers, *AEMO*, and *Metering Providers and Metering Data Providers*;

**[121] Clause 7.14.3 Additional matters**

Omit clause 7.14.3(a)(2)(ii) and substitute "[**Deleted**]".

**[122] Clause 7.14.3 Additional matters**

In clause 7.14.3(a)(2)(iv), after "*Metering Provider*" insert "and *Metering Data Provider* capabilities in accordance with schedule 7.4 and 7.6 respectively, and".

**[123] Clause 7.14.3 Additional matters**

Omit clause 7.14.3(a)(2)(v) and substitute:

- (v) the standards and/or technical requirements for the *metering data services database*; and

**[124] Clause 7.14.3 Additional matters**

In clause 7.14.3(a)(4), omit "in relation to type 5 and 6 *metering installations*,".

**[125] Clause 7.14.3 Additional matters**

In clause 7.14.3(a)(5), omit "*energy data held in metering installations*" and substitute "*metering data held in the metering data services database*".

**[126] Clause 7.14.4 Amendment of the metrology procedure**

In clause 7.14.4(e)(2), after "*Metering Providers*" insert "*Metering Data Providers*".

**[127] Clause 7.14.4 Amendment of the metrology procedure**

In clause 7.14.4(e)(5), omit "or *Metering Provider*" and substitute ", *Metering Provider* or *Metering Data Provider*".

## Schedule 2 Amendments of the National Electricity Rules

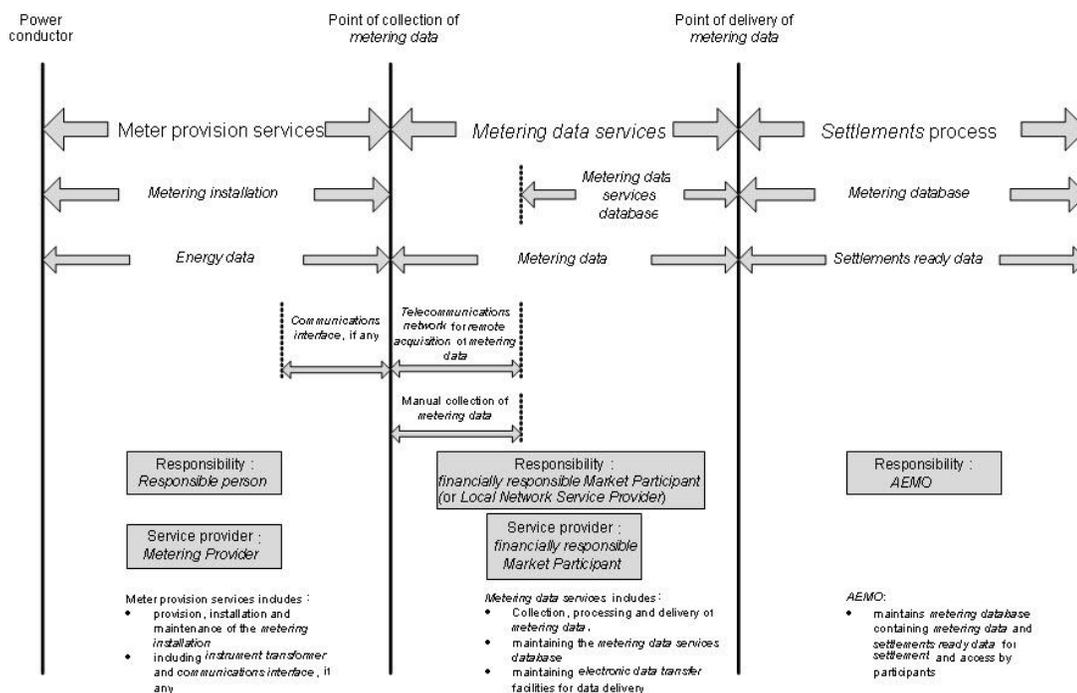
(Clause 4)

### [1] Schedule 7.1 Responsibility for metering

In the Schedule 7.1 heading, after "Metering" insert "installation and metering data".

### [2] Schedule 7.1 Responsibility for metering

In clause S7.1, omit the figure and insert:



### [3] Clause S7.2.1 General requirements

In clause S7.2.1(a), omit "The following are" and substitute "This Schedule 7.2 sets out".

### [4] Clause S7.2.1 General requirements

In clause S7.2.1(b), omit "may install a metering installation with" and substitute "require the responsible person to arrange for a metering installation to meet".

### [5] Clause S7.2.3 Accuracy requirements for metering installations

Omit the Table S7.2.3.1 Overall Accuracy Requirements of Metering Installation Components (Item 1) including the table heading, and substitute: Table S7.2.3.1 Overall Accuracy Requirements of Metering Installation Components

Type	Volume limit per annum per connection point	Maximum allowable overall error ( $\pm\%$ ) at full load (Item 7)		Minimum acceptable class or standard of components	Metering installation clock error (seconds) in reference to EST
		active	reactive		
1	greater than 1000GWh	0.5	1.0	0.2CT/VT/ <i>meter Wh</i> 0.5 <i>meter varh</i>	$\pm 5$
2	100 to 1000GWh	1.0	2.0	0.5CT/VT/ <i>meter Wh</i> 1.0 <i>meter varh</i>	$\pm 7$
3	0.75 to less than 100 GWh	1.5	3.0	0.5CT/VT 1.0 <i>meter Wh</i> 2.0 <i>meter varh</i> (Item 1)	$\pm 10$
4	less than 750 MWh (Item 2)	1.5	n/a	Either 0.5 CT and 1.0 <i>meter Wh</i> ; or whole current general purpose <i>meter Wh</i> :  <ul style="list-style-type: none"> <li>• meets requirements of clause 7.3.1(a)(10); and</li> <li>• meets the requirements of clauses 7.11.1(a) and (b) or 7.11.1(a) and (c).</li> </ul> (Item 1)	$\pm 20$ (Item 2a)
5	less than x MWh (Item 3)	1.5 (Item 3b)	n/a	Either 0.5 CT and 1.0 <i>meter Wh</i> ; or whole current connected general purpose <i>meter Wh</i> :  <ul style="list-style-type: none"> <li>• meets requirements</li> </ul>	$\pm 20$ (Item 3a)

Type	Volume limit per annum per connection point	Maximum allowable overall error ( $\pm\%$ ) at full load (Item 7) active reactive		Minimum acceptable class or standard of components	Metering installation clock error (seconds) in reference to EST
				of clause 7.3.1(a)(11); and <ul style="list-style-type: none"> <li>meets the requirements of clause 7.11.1(d).</li> </ul> (Item 1)	
6	less than y MWh (Item 4)	2.0 (Item 4b)	n/a	CT or whole current general purpose <i>meter</i> Wh recording <i>accumulated energy data</i> only. Processes used to convert the <i>accumulated metering data</i> into <i>trading interval metering data</i> and <i>estimated metering data</i> where necessary are included in the <i>metrology procedure</i> .  (Item 1)	(Item 4a)
7	volume limit not specified (Item 5)	(Item 6)	n/a	No <i>meter</i> . The <i>metering data</i> is <i>calculated metering data</i> determined in accordance with the <i>metrology procedure</i> .	n/a

**[6] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 1(a), omit "direct connected" and substitute "whole current".

**[7] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 2, omit "750MWh" and substitute "750 MWh".

**[8] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 2a, after "clock" insert "error".

**[9] Clause S7.2.3 Accuracy requirements for metering installations**

Omit clauses S7.2.3 Item 3(1), S7.2.3 Item 3(4), S7.2.3 Item 3(5) and S7.2.3 Item 4(4) and substitute "[Deleted]" in each case.

**[10] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 3(3), after ";" and insert "and".

**[11] Clause S7.2.3 Accuracy requirements for metering installations**

Omit clause S7.2.3 Item 3(6) and substitute:

- (6) the *metrology procedure* must:
  - (i) record the value of "x" for each *participating jurisdiction*; and
  - (ii) set out the method by which *estimated metering data* is prepared during the period when the *accumulated metering data* is not available.

**[12] Clause S7.2.3 Accuracy requirements for metering installations**

Omit clauses S7.2.3 Item 4(5)(ii) and (iii) and substitute:

- (ii) set out the method by which *accumulated metering data* is to be converted into *trading interval metering data* in accordance with clause 7.11.5;
- (iii) set out the method by which *estimated metering data* is to be prepared during the period when the *accumulated metering data* is not available; and

**[13] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 4(6), omit "devices within the installation may provide" and substitute "devices within the *metering installation* may record".

**[14] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 5(a), omit "*energy data* that is deemed to flow in the power conductor" and substitute "*metering data* that is deemed to correspond to the flow of electricity in the power conductor".

**[15] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 5(d), omit "limit that *connection point* from being metered" and substitute "prevent that *connection point* from being subject to *metering*".

**[16] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 Item 6, omit "calculated *energy data*" and substitute "*calculated metering data*".

**[17] Clause S7.2.3 Accuracy requirements for metering installations**

After clause S7.2.3 Item 6, insert:

Item 7: The maximum allowable overall error ( $\pm\%$ ) at different *loads* and *power factors* is set out in Table S7.2.3.2 to Table S7.2.3.6.

**[18] Clause S7.2.3 Accuracy requirements for metering installations**

In clause S7.2.3 after Table S7.2.3.6 Type 6 Installation – Annual Energy Throughput less than 0.75 GWh for note (b), omit "*metering system*" and substitute "*metering data*".

**[19] Clause S7.2.4 Check metering**

In clause S7.2.4(a) for the first column in the table, omit "Type" and substitute "Metering Installation Type in accordance with Table S7.2.3.1".

**[20] References to "revenue" in various clauses**

In clauses S7.2.4(c), S7.2.4(f), S7.4.3(e) and S7.5.2(b), omit "revenue" wherever occurring.

**[21] Clause S7.2.4 Check metering**

In clause S7.2.4(d), omit "clause 7.9.4" and substitute "the *metrology procedure*".

**[22] Clause S7.2.5 Resolution and accuracy of displayed or captured data**

In clause S7.2.5, omit ", *data logger*".

**[23] Clause S7.2.6.1 Design requirements**

In clauses S7.2.6.1(a) and S7.2.6.1(b), omit "*metering point*" and substitute "*connection point*".

**[24] Clause S7.2.6.1 Design requirements**

In clauses S7.2.6.1(a) and S7.2.6.1(b), omit "*revenue meter*" and substitute "*meter(s)*".

**[25] Clause S7.3.1 General**

In clause S7.3.1 in Table S7.3.2 Maximum Period Between Tests, omit "Whole-current (Direct Connected Meter)" and substitute "Whole current Meter".

**[26] Clause S7.3.1 General**

In clause S7.3.1 in Table S7.3.3 Period Between Inspections, omit " $2 \leq \leq 10$  GWh: 3 years" and substitute " $2 \leq$  GWh  $\leq 10$ : 3 years".

**[27] Clause S7.4.2 Categories of registration**

In clause S7.4.2(b), omit "In relation to *metering installation* types 5 and, 6 and 7, *AEMO* must establish categories of registration which are consistent with the service requirements" and substitute "Registrations in relation to *metering installation* types 5 and 6 must be categorised in accordance with Table S7.4.4 with the capabilities".

**[28] Clause S7.4.2 Categories of registration**

In clause S7.4.2 in Table S7.4.1 Categories of registration for accreditation, omit " $\cos\delta\%$ " and substitute " $\cos\phi\%$ ".

**[29] Clause S7.4.2 Categories of registration**

In clause S7.4.2 in Table S7.4.3 Categories of registration for accreditation, omit "Communication Link" and substitute "*Communications Interface*".

**[30] Clause S7.4.2 Categories of registration**

In clause S7.4.2, after Table S7.4.3 Categories of registration for accreditation insert:

**Table S7.4.4 Categories of registration for accreditation**

<b>Category</b>	<b>Competency</b>
5A	Class 1.0 and class 1.5 whole current Wh <i>meters</i> with $<0.3/\cos\phi\%$ uncertainty. Installation only.
6A	Class 1.5 whole current Wh <i>meters</i> with $<0.3/\cos\phi\%$ uncertainty. Installation only.
5B	Class 1.0 and class 1.5 whole current or CT connected Wh <i>meters</i> with $<0.3\cos\phi\%$ uncertainty. Provision, installation and maintenance services.
6B	Class 1.5 whole current or CT connected Wh <i>meters</i> with $<0.3/\cos\phi\%$ uncertainty. Provision, installation and maintenance services.

**[31] Clause S7.4.3 Capabilities of Metering Providers for metering installations types 1, 2, 3 and 4**

In clause S7.4.3(b)(4), omit "*data loggers, etc.,*" and substitute "and other components of the *metering installation*".

**[32] Clause S7.4.3 Capabilities of Metering Providers for metering installations types 1, 2, 3 and 4**

In clause S7.4.3(c), omit "including the remote accessing of data" and substitute ", where necessary, the *communications interface* to facilitate the *remote acquisition* of *metering data*".

**[33] Clause S7.4.3 Capabilities of Metering Providers for metering installations types 1, 2, 3 and 4**

In clause S7.4.3(d)(1), omit "*data loggers* or recorders to be" and substitute "recording is".

**[34] Clause S7.4.3 Capabilities of Metering Providers for metering installations types 1, 2, 3 and 4**

After clause S7.4.3(f), insert:

- (g) All of the capabilities relevant to that type of *metering installation* which are set out in the *Rules* and procedures authorised under the *Rules*.

**[35] Clause S7.4.4 Capabilities of Metering Providers for metering installations types 5, 6 and 7**

In the heading, omit "5, 6 and 7" and substitute "5 and 6".

**[36] Clause S7.4.4 Capabilities of Metering Providers for metering installations types 5, 6 and 7**

In clause S7.4.4, omit "5, 6 and / or 7" and substitute "5 and/or 6".

**[37] Clause S7.4.4 Capabilities of Metering Providers for metering installations types 5, 6 and 7**

In clause S7.4.4(a), omit "included in clause S7.4.3" and substitute "set out in the *Rules*, the *metrology procedure* and procedures authorised under the *Rules*".

**[38] Clause S7.4.4 Capabilities of Metering Providers for metering installations types 5, 6 and 7**

Omit clauses S7.4.4(b) and the second S7.4.4(a) and substitute "[Deleted]" in each case.

**[39] Clause S7.4.5 Capabilities of the Accredited Service Provider category**

In clause S7.4.5(c)(1), omit "service requirements" and substitute "capabilities".

**[40] Clause S7.5.2 Metering register information**

In clause S7.5.2(b)(8), after "*Metering Provider(s)*" insert "and *Metering Data Provider(s)*".

**[41] Clause S7.5.2 Metering register information**

In clause S7.5.2(c)(1), omit "data" and substitute "*energy data*".

## [42] New Schedule 7.6 Metering Data Provider

After clause S7.5.2, insert:

### Schedule 7.6 Metering Data Provider

#### S7.6.1 General

- (a) *A Metering Data Provider* must be accredited by and registered by *AEMO*.
- (b) *AEMO* must accredit and register a *Metering Data Provider* only for the type of work the *Metering Data Provider* is qualified to provide.
- (c) *AEMO* must establish a qualification process for *Metering Data Providers* that enables registration to be achieved in accordance with the requirements of this schedule 7.6.
- (d) *A Metering Data Provider* must ensure that *metering data services* are carried out in accordance with the *Rules* and procedures authorised under the *Rules*.

#### S7.6.2 Categories of registration

Categories of registration are set out in Table S7.6.2.

**Table S7.6.2 Categories of registration for accreditation**

<i>Metering installation type</i>	<b>Categories of registration</b>	
1, 2 3 and/or 4	Category 1D, 2D, 3D and/or 4D (for <i>remote acquisition</i> , processing and delivery of <i>metering data</i> for <i>connection points</i> other than <i>transmission network connection points</i> and <i>interconnectors</i> )	Category 1T, 2T, 3T and/or 4T (for <i>remote acquisition</i> , processing and delivery of <i>metering data</i> for <i>transmission network connection points</i> and <i>interconnectors</i> )
5 and/or 6	Category 5C and/or 6C (for manual collection of <i>metering data</i> only)	Category 5D and/or 6D (for manual collection, processing and delivery of <i>metering data</i> )
7	Category 7D (for processing and delivery of <i>metering data</i> )	

### **S7.6.3 Capabilities of Metering Data Providers**

*Metering Data Providers* must be able to exhibit to the reasonable satisfaction of *AEMO* the following capabilities, as applicable, for the categories of *Metering Data Provider* accreditation sought:

- (a) Detailed understanding of the *Rules*, and all procedures authorised under the *Rules* including the relevant *service level procedures* relating to the function of a *Metering Data Provider* and the carrying out of *metering data services*.
- (b) Detailed understanding of the participant role relationships that exist within the electricity market and in particular the intra-relationships and obligations that exist between the *Metering Data Provider*, *Metering Provider*, *responsible person* and *financially responsible Market Participant*.
- (c) An understanding of *metering* arrangements, including knowledge of *metering* equipment (*meters*, *current transformers* and *voltage transformers*).
- (d) Authorised access to *metering* software for the:
  - (1) collection of *metering data*;
  - (2) establishment, maintenance and operation of a *metering data services database* for the storage and management of *metering data* and *NMI Standing Data*; and
  - (3) the validation, substitution and estimation of *metering data*.
- (e) Processes and systems for the collection of *metering data* including:
  - (1) knowledge of manual collection and *remote acquisition* of *metering data* (as applicable);
  - (2) collection technologies and methodologies; and
  - (3) *metering* protocols and equipment.
- (f) Systems for the processing of *metering data* including:
  - (1) processes for the verification and commissioning of *metering data* and relevant *NMI Standing Data* pertaining to each *metering installation* into the *metering data services database*;
  - (2) processes for validation, substitution and estimation of *metering data*;
  - (3) processes for the storage, adjustment and aggregation of *metering data*; and

- (4) the secure storage of historical data.
- (g) Processes for the delivery of *metering data* and relevant *NMI Standing Data* to *Registered Participants* and *AEMO* including:
  - (1) delivery performance requirements for *metering data*; and
  - (2) an understanding of the relevant *metering data* file formats.
- (h) The availability of trained and competent staff to:
  - (1) read or interrogate the *metering installation*;
  - (2) collect and process metering data into the *metering data services database*;
  - (3) validate, substitute or estimate *metering data* as the case may be;
  - (4) maintain the physical and logical security of the *metering data services database* and only allow access to *metering data* by those persons entitled to receive *metering data*; and
  - (5) ensure the ongoing performance and availability of the collection process and the *metering data services database* are maintained inclusive of necessary system supports for backup, archiving and disaster recovery.
- (i) The establishment of a quality system which will:
  - (1) underpin all operational documentation, processes and procedures;
  - (2) facilitate good change control management of procedures, IT systems and software;
  - (3) provide audit trail management of *metering data* and *NMI Standing Data*;
  - (4) maintain security controls and data integrity; and
  - (5) maintain knowledge and understanding of the *Rules* and relevant procedures, standards and guides authorised under the *Rules*.
- (j) Understanding of the required logical interfaces necessary to support the provision of *metering data services* including the interfaces needed to:
  - (1) access *AEMO's* systems for the management and delivery of *metering data*;

- (2) support *B2B procedures*; and
- (3) support *Market Settlement and Transfer Solution Procedures* for delivery and update of *NMI Standing Data*.

## **Schedule 3          Amendments of the National Electricity Rules**

(Clause 5)

### **[1] References to "Metering Providers" in various rules**

In rules 3.19(a) and 3.19(c), omit "and *Metering Providers*" and substitute ", *Metering Providers* and *Metering Data Providers*" wherever occurring.

### **[2] Clause 5.3.7          Finalisation of connection agreements**

Omit clause 5.3.7(g)(4) and substitute:

- (4) arrangements to obtain physical access to the *metering installation* for the *Metering Provider* and the *Metering Data Provider* for *metering installations* type 5 and 6; and

### **[3] Clause S5.2.6.2          Communications equipment**

In clause S5.2.6.2(d), omit "a communications interface" and substitute "an interface for communication purposes".

### **[4] Clause S5.2.6.2          Communications equipment**

In clause S5.2.6.2(e), omit "communications interface" and substitute "interface for communication purposes".

### **[5] Clause S5.3a.4.3          Communications equipment**

In clause S5.3a.4.3, omit "a communications interface" and substitute "an interface for communication purposes".

### **[6] Clause S5.3a.4.3          Communications equipment**

In clause S5.3a.4.3, omit "this communications interface" and substitute "this interface for communication purposes".

### **[7] Clause S5.6          Terms and Conditions of Connection agreements**

In clause S5.6(1), after "*Metering Provider*" insert "and access to *metering installations* type 5 and 6 for the *Metering Data Provider*".

### **[8] References to "energy data" in various clauses**

In clauses 6.20.1(e) and 6.20.1(e) in Appendix 1 of Chapter 11, omit "*energy data*" wherever occurring and substitute "*metering data*".

**[9] Clause 8.2.1 Application and guiding principles**

In clause 8.2.1(a1), omit "and *Connection Applicants*" and substitute ", *Connection Applicants, Metering Providers and Metering Data Providers*".

**[10] Clause 8.2.1 Application and guiding principles**

Omit clause 8.2.1(h)(11) and substitute:

- (11) a decision by *AEMO* whether or not to deregister a *Metering Provider* or *Metering Data Provider* under clause 7.4.3(d) or to suspend a *Metering Provider* or *Metering Data Provider* from a category of registration under clause 7.4.3(c) or to impose agreed constraints on the continued operation of a *Metering Provider* or *Metering Data Provider*;

**[11] Schedule 9G1 Metering Transitional Arrangements**

In Schedule 9G1 of Chapter 9 in clause 5.1(c), omit "for *revenue metering*".

## **Schedule 4          Amendments of the National Electricity Rules**

(Clause 6)

### **[1] Chapter 10          Deleted Definitions**

In Chapter 10, omit the following definitions:

#### **agency data collection system**

The system used by the operator of an *agency metering database* to collect, process and transfer the *metering data* from a *meter* to the *AEMO settlements* process.

#### **communication link**

All communications equipment, processes and arrangements that lie between the *meter* and the *data logger*, where the *data logger* is external to the device that contains the *measurement elements*, and/or the *data logger* and the telecommunications network.

#### **data collection system**

All equipment and arrangements that lie between the *metering database* and the point where the *metering data* enters the *telecommunications network*.

#### **data logger**

A *metering installation* database or a device that collects electronic signals from a *measurement element* and packages it into 30 minute intervals (or sub-multiples). This device may contain data storage capability, be a separate item of equipment, and/or be combined with the *energy* measuring components within one physical device.

#### **energy data services**

The services that involve:

- (a)
  - (1) collation of *energy data* from the *meter* or *meter/associated data logger*;
  - (2) the processing of the *energy data* in the *metering installation* database;
  - (3) storage of the *energy data* in the *metering installation* database; and

- (4) the provision of access to the data for those parties that have rights of access to the data.

**estimated energy data**

The data that results from an estimation of the flow of electricity in a power conductor where the data applies to a *trading interval* or a period in excess of a *trading interval*. The estimation is made in relation to a *market load* and would not apply to a *metering point* where *accumulated energy data* or *interval energy data* is not available, or an *unmetered connection point*.

**revenue meter**

The *meter* that is used for obtaining the primary source of *metering data*.

**revenue metering data**

The *metering data* obtained from a *revenue metering installation*.

**revenue metering installation**

A *metering installation* used as the primary source of *metering data* for the *settlements* process.

**revenue metering point**

The *metering point* at which the *revenue metering installation* is *connected*.

**[2] Chapter 10 Substituted Definitions**

In Chapter 10, substitute the following definitions:

**accumulated energy data**

The data that results from the measurement of the flow of electricity in a power conductor where the data represents a period in excess of a *trading interval*. *Accumulated energy data* is held in the *metering installation*. The measurement is carried out at a *metering point*.

**check meter**

An additional *meter* used as a source of *check metering data* for Type 1 and Type 2 *metering installations* as specified in schedule 7.2.

**check metering data**

The *energy data*, once collected from a *check metering installation*, is *check metering data*. *Check metering data* is held in a *metering data services database*.

### **check metering installation**

A *metering installation* that includes a *check meter* which is used as the source of *check metering data* for validation in the *settlements* process.

### **interval energy data**

The data that results from the measurement of the flow of electricity in a power conductor where the data is prepared and recorded by the *metering installation* in intervals which correspond to a *trading interval* or are sub-multiples of a *trading interval*. *Interval energy data* is held in the *metering installation*.

### **Market Management Systems Access Procedures**

The procedures to be followed by *Registered Participants*, *Metering Providers* and *Metering Data Providers* in connecting to and making use of the *market management systems* from time to time *published* by AEMO under rule 3.19.

### **metering data**

*Accumulated metering data*, *interval metering data*, *calculated metering data*, *substituted metering data*, *estimated metering data* and *check metering data*.

### **metering installation**

The assembly of components including the *instrument transformer*, if any, measurement element(s) and processes, if any, recording and display equipment, *communications interface*, if any, that are controlled for the purpose of metrology and which lie between the *metering point(s)* and the point at or near the *metering point(s)* where the *energy data* is made available for collection.

#### **Notes:**

- (1) The assembly of components may include the combination of several metering points to derive the metering data for a connection point.
- (2) The metering installation must be classified as being for revenue purposes and/or as a check metering installation.
- (3) An unmetered connection point in accordance with schedule 7.2 does not require a meter; it is nevertheless considered as having a metering installation.

### **profile**

*Metering data* or costs for a period longer than a *trading interval* allocated into *trading intervals*.

### **Registered Participant**

A person who is registered by *AEMO* in any one or more of the categories listed in clauses 2.2 to 2.7 (in the case of a person who is registered by *AEMO* as a *Trader*, such a person is only a *Registered Participant* for the purposes referred to in clause 2.5A). However, as set out in clause 8.2.1(a1), for the purposes of some provisions of clause 8.2 only, *AEMO*, and *Connection Applicants*, *Metering Providers* and *Metering Data Providers* who are not otherwise *Registered Participants* are also deemed to be *Registered Participants*.

### **remote acquisition**

The acquisition of *interval metering data* from a *metering installation*, where a *telecommunications network* transmits the *metering data* from the *communications interface* at site of the *metering point* to the *metering data services database*, and:

- (a) does not, at any time, require the presence of a person at, or near, the *interval meter* for the purposes of data collection or data verification (whether this occurs manually as a walk-by reading or through the use of a vehicle as a close proximity drive-by reading), and
- (b) remote acquisition includes but is not limited to methods that transmit metering data via:
  - (1) fixed-line telephone ('direct dial-up');
  - (2) satellite;
  - (3) the internet;
  - (4) wireless or radio, including mobile telephone networks;
  - (5) power line carrier; or
  - (6) any other equivalent technology.

#### **Note:**

For the requirements of clause 7.3.4(f) remote acquisition may collect other than interval metering data.

### **responsible person**

The person who has responsibility for the provision, installation and maintenance of a *metering installation* as described in Chapter 7.

### **settlements ready data**

The *metering data* that has undergone a validation and substitution process by *AEMO* for the purpose of *settlements* and is held in the *metering database*.

### **telecommunications network**

A telecommunications network that provides access for public use or an alternate telecommunications network that has been approved by AEMO for the *remote acquisition of metering data*.

### **type 5 accumulation boundary**

The volume of *energy* for a *connection point* that has a type 5 *metering installation* above which the *metering data* must be collected as *interval metering data* for the purpose of producing *settlements ready data*.

#### **Note:**

Below the type 5 accumulation boundary, the metering data may be collected from the metering installation as accumulated metering data for the purpose of producing settlements ready data, in which case the metering installation must be registered with AEMO as a type 6 metering installation. Otherwise, the metering data may be collected as interval metering data for the purpose of producing settlements ready data in which case the metering installation must be registered with AEMO as a type 5 metering installation.

## **[3] Chapter 10            New Definitions**

In Chapter 10, insert the following definitions:

### **accumulated metering data**

The *accumulated energy data*, once collected from a *metering installation*, is *accumulated metering data*. *Accumulated metering data* is held in a *metering data services database*.

### **calculated metering data**

The *trading interval* data corresponding to the calculation of consumed *energy* for a type 7 *metering installation* in accordance with the *metrology procedure*. *Calculated metering data* is held in the *metering data services database*.

### **communications interface**

The modem and other devices and processes that facilitate the connection between the *metering installation* and the *telecommunications network* for the purpose of the *remote acquisition of metering data*.

### **estimated metering data**

The estimated values of *accumulated metering data*, *interval metering data* or *calculated metering data* that have been prepared in accordance with the *metrology procedure*. *Estimated metering data* is held in a *metering data services database*.

**interval metering data**

The *interval energy data*, once collected from a *metering installation*, is *interval metering data*. *Interval metering data* is held in a *metering data services database*.

**Metering Data Provider**

A person who meets the requirements listed in schedule 7.6 and has been accredited and registered by *AEMO* as a *Metering Data Provider*.

**metering data services**

The services that involve the collection, processing, storage and delivery of *metering data* and the management of relevant *NMI Standing Data* in accordance with the *Rules*.

**metering data services database**

The database established and maintained by the *Metering Data Provider* that holds the *metering data* and relevant *NMI Standing Data* relating to each *metering installation* for which the *responsible person* has engaged the *Metering Data Provider* to provide *metering data services*.

**metering installation malfunction**

The full or partial failure of the *metering installation* which means that *metering data* that meets the requirements of the *Rules* or procedures authorised under the *Rules* cannot be collected.

**service level procedures**

The procedures established under the *Rules consultation procedures* by *AEMO* in accordance with clause 7.2.9.

**substituted metering data**

The substituted values of *accumulated metering data*, *interval metering data* or *calculated metering data* prepared in accordance with the *metrology procedure*. *Substituted metering data* is held in a *metering data services database*.

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