

Embedded Networks Rule Change:

Appendix A: Draft Rule

This draft is based on version 64 of the National Electricity Rules.

2. Registered Participants and Registration

2.5.1 Registration as a Network Service Provider

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- (h) Subject to clause 2.5.1(i), the AER must not grant any person who engages in the activity of owning, controlling or operating an embedded network an exemption under section 13 of the National Electricity Law unless that exemption is subject to terms and conditions requiring that person to appoint and to maintain the appointment of an Embedded Network Manager including, if AEMO deregisters the appointed Embedded Network Manager or suspends the appointed Embedded Network Manager from registration under clause 7.16.4(d), by appointing a replacement Embedded Network Manager.
- (i) Clause 2.5.1(h) does not apply in respect of any exemption granted by the AER that is deemed to apply automatically to a class of persons without a person in that class having to make any application to, or to complete any registration with, the AER.

3. Market Rules

3.6.3 Distribution losses

- (a) *Distribution losses are electrical energy losses incurred in the conveyance of electricity over ~~a~~-distribution networks.*
- (b) *Distribution loss factors:*
 - (1) *notionally describe the average electrical energy losses for electricity transmitted on ~~a~~-distribution networks between a distribution network connection point and a transmission network connection point or virtual transmission node for the financial year in which they apply;*
 - (2) for any connection point on a Distribution Network Service Provider's distribution network including any parent connection point on an embedded network connected to that distribution network, will be either:
 - (i) *a site specific distribution loss factor derived in accordance with the methodology determined by the AER or the Distribution Network Service Provider pursuant to clause 3.6.3(h), for each distribution network connection point of the following types:*

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- (A) a *connection point* for an *embedded generating unit* with actual *generation* of more than 10MW, based on the most recent data available for a consecutive 12 month period at the time of determining the *distribution loss factor*. Where relevant data is not available for a consecutive 12 month period as a *distribution network connection point* is newly established or has been modified, a *Network Service Provider* may determine whether an *embedded generating unit* has *generation* of more than 10MW, based on its best projection of *generation* in the *financial year* in which the *distribution loss factor* is to apply, taking into account the terms of the relevant *connection agreement*;
- (B) a *connection point* for an end-user with actual or forecast *load* of more than 40GWh or an electrical demand of more than 10MW, based on the most recent data available for a consecutive 12 month period at the time of determining the *distribution loss factor*. Where relevant data is not available for a consecutive 12 month period as a *distribution network connection point* is newly established or has been modified, a *Network Service Provider* may determine whether an end-user has *load* of more than 40GWh or forecast *peak load* of more than 10MW, based on its best projection of *load* in the *financial year* in which the *distribution loss factor* is to apply, taking into account the terms of the relevant *connection agreement*;
- (C) a *connection point* for a *Market Network Service Provider*; and
- (D) a *connection point* between two or more *distribution networks*; or
- (ii) a standard distribution loss factor, for all connection points on the Distribution Network Service Provider's distribution network not of a type described in clause 3.6.3(b)(2)(i); derived, in accordance with the methodology determined by the AER or the Distribution Network Service Provider pursuant to clause 3.6.3(h), using the volume weighted average of the average electrical energy loss between the transmission network connection point or virtual transmission node to which it is assigned and each distribution network connection point in the relevant voltage class (determined in accordance with clause 3.6.3(d)(2)) assigned to that transmission network connection point or virtual transmission node, for all connection points on a distribution network not of a type described in clause 3.6.3(b)(2)(i);

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(2A) for any connection point on an embedded network excluding any parent connection point on an embedded network connected to a Distribution Network Service Provider's distribution network, will be a site specific or standard distribution loss factor derived in accordance with relevant conditions included for that purpose in the exemption granted by the AER under section 13(3) of the National Electricity Law and clause 2.5.1(d) in respect of that embedded network; and

- (3) are to be used in the settlement process as a notional adjustment to the electrical *energy*, expressed in MWh, flowing at a *distribution network connection point* in a *trading interval* to determine the *adjusted gross energy* amount for that *connection point* in that *trading interval*, in accordance with clause 3.15.4.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (b1) Where a *Generator*, or a *Small Generation Aggregator*, meets the reasonable cost of the *Distribution Network Service Provider* in performing the necessary calculation in respect of a *generating unit* of up to 10MW or 40GWh per annum capacity, the *Distribution Network Service Provider* must calculate a site specific *distribution loss factor* that, notwithstanding any other provision of the *Rules* to the contrary, for the purposes of the *Rules* is to apply in respect of that *generating unit* on the same basis as applies for a *generating unit* of more than 10MW or 40GWh per annum capacity as though the *generating unit* were a unit of more than 10MW or 40GWh per annum capacity.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (c) Each *Distribution Network Service Provider* must assign each *connection point* on its *distribution network*, of a type described in clause 3.6.3(b)(2)(i), to a single *transmission network connection point* taking into account normal *network* configurations and predominant *load* flows.
- (d) Each *Distribution Network Service Provider* must assign each *connection point* on its *distribution network*; **which is** not of a type described in clause 3.6.3(b)(2)(i):
- (1) where practicable, to a single *transmission network connection point* or otherwise, to a *virtual transmission node*, taking into account normal network configurations and predominant *load* flows; and
 - (2) to a class of *distribution network connection points* based on the location of, *voltage* of and pattern of electrical *energy* flows at the *distribution network connection point*.
- (e) So far as practicable, the assignment of *connection points* on ~~the~~a *distribution network* to:
- (1) *transmission network connection points* under clause 3.6.3(c); or
 - (2) *transmission network connection points* or *virtual transmission nodes* and a class of *distribution network connection points* under clause 3.6.3(d),
- must be consistent with the geographic boundaries of the *pricing zones* for use in *distribution service* pricing, and the *voltage* levels incorporated within those *pricing zones*.
- (f) The assignment of *connection points* on a *distribution network*:
- (1) to a single *transmission network connection point* under clause 3.6.3(c); or

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (2) to a *transmission network connection point* or *virtual transmission node* and a class of *distribution network connection points* under clause 3.6.3(d),

is subject to the approval of the AER and the *Distribution Network Service Provider* must inform AEMO of such approved assignments.

(f1) The relevant *Embedded Network Manager* must assign each of the following *connection point* on an *embedded network* as follows:

(1) if the *embedded network* is connected to a *Distribution Network Service Provider's* *distribution network*, then each *child connection point* on that *embedded network* is to be assigned to the same single *transmission network connection point* or *virtual transmission node* to which under clause 3.6.3(c) or (d) the *Distribution Network Service Provider* has assigned the *parent connection point* on that *embedded network*;

(2) if the *embedded network* is connected to another *embedded network* which is, or which is one in a series of *embedded networks* which ultimately is, connected to a *Distribution Network Service Provider's* *distribution network*, then each *child connection point* on that *embedded network* is to be assigned to the same single *transmission network connection point* or *virtual transmission node* to which under clause 3.6.3(c) or (d) the *Distribution Network Service Provider* has assigned the *connection point* on the *Distribution Network Service Provider's* *distribution network* through which electricity is conveyed to that *embedded network*;

(3) if the *embedded network* is connected to a *transmission network* at a *transmission network connection point*, each *connection point* on that *embedded network* is to be assigned to that *transmission network connection point*; and

(4) if the *embedded network* is connected to another *embedded network* which is, or which is one in a series of *embedded networks* which ultimately is, connected to a *transmission network* at a *transmission network connection point*, each *connection point* on that *embedded network* is to be assigned to that *transmission network connection point*.

(g) *Distribution loss factors* must be determined by a *Distribution Network Service Provider* for all *connection points* on its *distribution network* either individually, for all ~~connection points~~ *connection points* assigned to a single *transmission network connection point* under clause 3.6.3(c), or collectively, for all *connection points* assigned to a *transmission network connection point* or a *virtual transmission node* and a particular *distribution network connection point* class under clause 3.6.3(d), in accordance with:

(1) the methodology developed, *published* and maintained by the AER for the determination of *distribution loss factors*; or

(2) where the AER has not *published* a methodology under clause 3.6.3(g)(1), the methodology developed, *published* and maintained by the *Distribution Network Service Provider* for the determination of *distribution loss factors*.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(g1) If a person is an *Exempt Network Service Provider* in respect of an *embedded network* and that person's exemption includes a condition requiring that person to determine a *distribution loss factor* for *connection points* of either or both of the following kinds:

(1) *child connection points* on that *embedded network*; and

(2) if the *embedded network* is connected to a *transmission network*, the *parent connection point* on that *embedded network*.

then that person must determine a *distribution loss factor* for those *connection points* in accordance with conditions included for that purpose in the exemption.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(g2) Notwithstanding any other provision of this clause 3.6.3, no *distribution loss factor* needs to be determined for a *child connection point* on an *embedded network* unless that *child connection point* is, or there is a proposal for that *child connection point* to become, a *market connection point*.

(g3) If a person referred to in clause 3.6.3(g1), or an *Embedded Network Manager* on behalf of such a person, reasonably requires any information from a *Network Service Provider* in order to determine the *distribution loss factor* for a *connection point* in accordance with clause 3.6.3(g1), then, on or as soon as possible and in any event within 10 *business days* after that person's or that *Embedded Network Manager's* request, the *Network Service Provider* must provide that information to that person or to that *Embedded Network Manager*.

(h) The methodology for the determination of *distribution loss factors* referred to in clause 3.6.3(g) must be developed having regard to the following principles:

(1) The aggregate of the *adjusted gross energy* amounts for a *distribution network*, determined in accordance with clause 3.15.4 using the *distribution loss factors* for the *financial year* in which the *distribution loss factors* are to apply should equal, as closely as is reasonably practicable, the sum of:

A. the amount of electrical *energy*, expressed in MWh, flowing at all *connection points* in the *distribution network* in the *financial year* in which the *distribution loss factors* are to apply; and

B. the total *electrical energy losses* incurred on the *distribution network* in the *financial year* in which the *distribution loss factors* are to apply.

(2) The methodology used to determine *distribution loss factors* for a *financial year* should incorporate provisions requiring a *Distribution Network Service Provider* to undertake a reconciliation between the aggregate of the *adjusted gross energy* amounts for its *distribution network* for the previous *financial year* determined in accordance with clause 3.15.4 using the *distribution loss factors* that applied for *connection points* in that *distribution network* in the previous *financial year* and the sum of:

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- (i) the amount of electrical *energy*, expressed in MWh flowing, at all *connection points* in its *distribution network* in the previous *financial year*; and
 - (ii) the total *electrical energy losses* incurred on its *distribution network* in the previous *financial year*.
 - (3) The *distribution loss factor* for a *distribution network connection point*, other than those described in clause 3.6.3(b)(2)(i), is determined using a volume weighted average of the *average electrical energy loss* between the *transmission network connection point* or *virtual transmission node* to which it is assigned and each *distribution network connection point* in the relevant class of *distribution network connection points* assigned to that *transmission network connection point* or *virtual transmission node* for the *financial year* in which the *distribution loss factor* is to apply.
 - (4) The *distribution loss factor* for a *distribution network connection point* described in clause 3.6.3(b)(2)(i) is determined using the *average electrical energy loss* between the *distribution network connection point* and the *transmission network connection point* to which it is assigned in the *financial year* in which the *distribution loss factor* is to apply.
 - (5) In determining the *average electrical energy losses* referred to in clauses 3.6.3(h)(3) and (4), ~~the *Distribution Network Service Provider* must use~~ the most recent actual *load* and *generation* data available for a consecutive 12 month period ~~must be used except that adjustments to~~ but may adjust this *load* and *generation* data ~~may be made~~ to take into account projected *load* and / or *generation* growth in the *financial year* in which the *distribution loss factors* are to apply.
 - (6) In determining *distribution loss factors*, flows in *network elements* that solely or principally provide *market network services* will be treated as invariant, as the methodology is not seeking to calculate the *marginal losses* within such *network elements*.
 - (i) Each year ~~the~~ a *Distribution Network Service Provider* must determine the *distribution loss factors* to apply in the next *financial year* in accordance with clauses 3.6.3(g) and 3.6.3(g1)(1)(A) and provide these to AEMO for publication by 1 April. Before providing the *distribution loss factors* to AEMO for publication, the *Distribution Network Service Provider* must obtain the approval of the AER for the *distribution loss factors* it has determined for the next *financial year*.
 - (j) Each year a person referred to in clause 3.6.3(g1) must determine the *distribution loss factors* to apply in the next *financial year* in accordance with clauses 3.6.3(g1) and provide these to AEMO for publication by 1 April. Before providing the *distribution loss factors* to AEMO for publication, that person must obtain the approval of the AER for the *distribution loss factors* it has determined for the next *financial year*.
 - (k) In this clause 3.6.3, any reference to a *Distribution Network Service Provider* means a person who engages in the activity of owning, controlling or operating a *distribution system* and who is registered by AEMO as a *Network Service Provider* under Chapter 2.

3.13.3 Standing data

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- (o) *Network Service Providers* and persons referred to in clause 3.6.3(g1) must advise AEMO of their *distribution loss factors*, duly authorised by the AER, and AEMO must *publish* such *distribution loss factors* in accordance with clauses 3.6.3(i) and (i).

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7. Metering

7.1.4 Amendment of procedures in the Metering Chapter

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- (e) Where in AEMO's reasonable opinion, a proposal referred to in paragraph (a) relates to amendments that are of a minor or administrative nature, AEMO is not required to undertake the *Rules consultation procedures* but must:
- (1) *publish* the proposal including the accompanying reasons;
 - (2) issue a notice to *Registered Participants, Metering Providers, Metering Data Providers, Embedded Network Managers, Ministers* and the AER advising that the amendment to the procedure has been *published*;
 - (3) invite submissions on the proposal;
 - (4) allow 10 *business days* for the receipt of submissions;
 - (5) allow a reasonable extension of time for submissions if requested in writing by a *Registered Participant, Metering Provider; ~~or~~ Metering Data Provider or Embedded Network Manager*;
 - (6) *publish* submissions as soon as practicable after submissions have been received;

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7.2.2 Responsibility of the Market Participant

- (a) A *Market Participant*:
- (1) may elect to be the *responsible person* for a *metering installation* that is a type 1, 2, 3 or 4 *metering installation* connected to, or proposed to be connected to, a *Local Network Service Provider's network*; and
 - (2) is the *responsible person* for a *metering installation*, regardless of its type, if the *connection point* for that *metering installation* is or is proposed to be a *child connection point* in an *embedded network*.
- (b) A *Market Participant* is the *responsible person* for a type 1, 2, 3 or 4 *metering installation* referred to in clause 7.2.2(a)(1) if:
- (1) the *Market Participant* elects not to request an offer from, or does not accept the offer of, the *Local Network Service Provider* for the provision of a *metering installation* under clause 7.2.3; or
 - (2) an agreement under clause 7.2.3 is terminated due to a breach by the *Market Participant*.

7.2.3 Responsibility of the Local Network Service Provider

- (a) The *Local Network Service Provider* is the *responsible person* for:
- (1) a type 1, 2, 3 or 4 *metering installation* referred to in clause 7.2.2(a)(1) ~~connected to, or proposed to be connected to, the *Local Network Service Provider's network*~~ where the *Market Participant* has accepted the *Local Network Service Provider's* offer in accordance with paragraphs (b) and (c); and
 - (2) a type 5, 6 or 7 *metering installation* connected to, or proposed to be connected to, the *Local Network Service Provider's network* in accordance with paragraphs (d) to (i).

Types 1 - 4 metering installations on the Local Network Service Provider's network

- (b) A *Market Participant* may request in writing an offer from the *Local Network Service Provider* to act as the *responsible person* where a type 1, 2, 3 or 4 *metering installation* referred to in clause 7.2.2(a)(1) is, or is to be, installed.
- (c) If the *Local Network Service Provider* receives a request under paragraph (b), the *Local Network Service Provider* must:
- (1) offer to act as the *responsible person* in respect of that *metering installation*;
 - (2) provide the *Market Participant* with the name of the *Metering Provider* and the name of the *Metering Data Provider* that would be engaged under clauses 7.2.5(a) and 7.2.5(c1), if requested by the *Market Participant*; and
 - (3) provide the *Market Participant* with the terms and conditions relating to the offer,

no later than 15 *business days* after the *Local Network Service Provider* receives the written request from the *Market Participant*.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

Types 5 -7 metering installations on the Local Network Service Provider's network

- (d) The *Local Network Service Provider* may provide a *Market Participant* with a standard set of terms and conditions on which it will agree to act as the *responsible person* for a type 5, 6 or 7 *metering installation* referred to in clause 7.2.3(a)(2).
- (e) Where the *Local Network Service Provider* has not provided the *Market Participant* with the standard set of terms and conditions referred to in paragraph (d), the *Market Participant* must request an offer from the *Local Network Service Provider* to act as the *responsible person* where such a type 5, 6 or 7 *metering installation* is, or is to be, installed.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

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- (f) The *Local Network Service Provider* must, within 15 *business days* of receipt of the request under paragraph (e), make an offer to a *Market Participant* setting out the terms and conditions on which it will agree to act as the *responsible person*.
 - (g) The terms and conditions of an offer made under paragraphs (d) or (f) must:
 - (1) be fair and reasonable; and
 - (2) not have the effect of unreasonably discriminating between *Market Participants*, or between the customers of a *Market Participant*.
 - (h) In relation to an offer made under paragraphs (d) or (f), a *Market Participant*:
 - (1) must accept the offer; or
 - (2) may dispute the offer in accordance with rule 8.2.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

- (i) If a *Market Participant* accepts the offer in accordance with paragraph (h), the *Local Network Service Provider*:
 - (1) becomes the *responsible person*; and
 - (2) must provide *AEMO* with the *NMI* for the *metering installation* within 10 *business days* of entry into a *connection agreement* under clause 5.3.7 with that *Market Participant*.

7.2.8 Market Settlement and Transfer Solution Procedures

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- (c) The *Market Settlement and Transfer Solution Procedures* may include roles and responsibilities for *Metering Providers*, ~~and~~ *Metering Data Providers* and *Embedded Network Managers*.
- (d) All *Registered Participants*, *Metering Providers*, ~~and~~ *Metering Data Providers* and *Embedded Network Managers* must comply with the *Market Settlement and Transfer Solution Procedures*.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

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7.2A.4 Content of the B2B Procedures

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- (h) The *B2B Procedures* may include roles and responsibilities for *Metering Providers*, ~~and~~ *Metering Data Providers* and *Embedded Network Managers*.
- (i) Subject to the *Information Exchange Committee* following the requirements placed upon it in the *Rules* in relation to the *B2B Procedures*, *Local Retailers*, *Market Customers*, *Distribution Network Service Providers*, *AEMO*, *Metering Providers*, ~~and~~ *Metering Data Providers* and *Embedded Network Managers* must comply with the *B2B Procedures*.

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7.7 Entitlement to metering data and access to metering installation

- (a) The only persons entitled to access *energy data* or to receive *metering data*, *NMI Standing Data*, *settlements ready data* or data from the *metering register* for a *metering installation* are:

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- (4) the *Network Service Provider* or providers and any Exempt Embedded Network Service Provider and any Embedded Network Manager associated with the *connection point*;

...

7.14.1 Requirements of the metrology procedure

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- (c) The *metrology procedure* must include:

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- (3) the obligations of *responsible persons*, *financially responsible Market Participants*, *Local Network Service Providers*, *Metering Providers*, ~~and~~ *Metering Data Providers* and Embedded Network Managers;

7.16 Embedded Networks, Exempt Embedded Network Providers and Embedded Network Managers

7.16.1 Role of Embedded Network Managers

The provision of embedded network management services must be carried out only by an Embedded Network Manager.

Note

This clause is classified as a civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

7.16.2 Qualifications and registration of Embedded Network Managers

- (a) Subject to clause 11.68.2(a), an Embedded Network Manager is a person who:

- (1) meets the requirements set out in schedule 7.7; and
(2) is accredited and registered by AEMO in that capacity in accordance with the qualification process established under clause S7.7.1(b).

- (b) Any person may apply to AEMO for accreditation and registration as an Embedded Network Manager.

- (c) AEMO must include requirements for accreditation and registration of Embedded Network Managers in the ENM service level procedures. The adoption of the requirements by Embedded Network Managers is to be included in the qualification process in accordance with clause S7.7.1(b). The requirements must include a dispute resolution process.

- (d) AEMO must develop and publish guidelines to assist persons wishing to be accredited and registered by AEMO as an Embedded Network Manager with the preparation of their applications to AEMO.

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- (e) An *Embedded Network Manager* must comply with the provisions of the *Rules* and procedures authorised under the *Rules* that are expressed to apply to *Embedded Network Managers*.

7.16.3 Requirements of the ENM service level procedures

- (a) AEMO must establish, maintain and *publish* the *ENM service level procedures* that apply to *Embedded Network Managers*, in accordance with this Chapter 7 and this rule 7.16.3.
- (b) AEMO must establish and *publish* the *ENM service level procedures* in accordance with clause 7.1.3.
- (c) The *service level procedures* must include:
- (1) the requirements for the provision of *embedded network management services*;
 - (2) the requirements for the management of relevant *EN wiring information*;
 - (3) information to ensure consistency in practice between the *ENM service level procedures* and other documents developed and published by AEMO, including the practices adopted in the *Market Settlement and Transfer Solutions Procedures*.
- (d) The *ENM service level procedures* must include requirements for accreditation and registration including, without limitation:
- (1) requirements relating to cooperation with AEMO, *Registered Participants*, *Metering Providers* and *Metering Data Providers*;
 - (2) the confidentiality of information collected by the *Embedded Network Managers*;
 - (3) the resolution of disputes between AEMO and the *Embedded Network Managers*, including disputes associated with a breach of the *Rules* and procedures authorised under the *Rules*;
 - (4) the access of AEMO to and the inspection and audit by AEMO of any relevant database maintained by the *Embedded Network Managers*;
 - (5) the insurance which must be taken out by or on behalf of the *Embedded Network Managers*;
 - (6) subcontracting by the *Embedded Network Managers*;
 - (7) the software and systems that are used by the *Embedded Network Managers*;
 - (8) the ownership of intellectual property that is developed or used by the *Embedded Network Managers*; and
 - (9) 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 an *Embedded Network Manager*.
- (e) The *ENM service level procedures* must contain information to ensure consistency in practice between the procedures and other documents developed and published by AEMO, including the practices adopted in the *Market Settlement and Transfer Solutions Procedures*.

7.16.4 Deregistration of Embedded Network Managers

- (a) AEMO must establish, maintain and *publish* a procedure for deregistration of *Embedded Network Managers* which:
- (1) empowers AEMO to deregister an *Embedded Network Manager* if the *Embedded Network Manager* requests deregistration and the request is accompanied by the documents, if any, required by the procedure;
 - (2) empowers AEMO to deregister an *Embedded Network Manager*, suspend an *Embedded Network Manager* from registration or allow an *Embedded Network Manager* to continue to operate under constraints agreed with AEMO; and
 - (3) incorporates the principles specified in paragraph (b).
- (b) A breach of the provisions of the *Rules* or of the procedures under the *Rules* must be determined against the following principles:
- (1) the definition of breach must contain three or more levels of severity, the highest level of severity being a ‘material breach’;
 - (2) the deregistration of an *Embedded Network Manager* can only occur if it can be demonstrated that the *Embedded Network Manager* has performed a material breach; and
 - (3) the levels of a breach with severity below a material breach are to be treated as warnings with different levels of magnitude.
- (c) If AEMO reasonably determines that an *Embedded Network Manager* has breached the provisions of the *Rules* or of procedures authorised under the *Rules* that applies to *Embedded Network Managers* then:
- (1) AEMO must send to that *Embedded Network Manager* a notice in writing setting out the nature of the breach; and
 - (2) AEMO must, if the *Embedded Network Manager* remains in breach for a period of more than 7 days after notice in accordance with subparagraph (1), conduct a review to assess the *Embedded Network Manager*’s capability for ongoing compliance with the *Rules* or procedures authorised under the *Rules*.
- (d) AEMO may, following a review conducted under paragraph (c) and in accordance with the procedure under paragraph (a), deregister the *Embedded Network Manager*, suspend the *Embedded Network Manager* from registration or allow the *Embedded Network Manager* to continue to operate under constraints agreed with AEMO.
- (e) If following a review under paragraph (d), AEMO deregisters or suspends from registration or allows the *Embedded Network Manager* to continue to operate under constraints, then AEMO must inform the relevant *Exempt Embedded Network Service Providers* the relevant *responsible person(s)*, the relevant *financially responsible Market Participants* and the relevant *Local Network Service Providers* of the outcome of that review.

7.16.5 List of Embedded Network Managers

AEMO must *publish* a list of persons accredited and registered as *Embedded Network Managers*.

7.16.6 EN information

An *Embedded Network Manager* must maintain information about the types and configuration of *metering installations* at the *Embedded Network Manager's embedded network* and about the subtractive or other arrangements used in respect of those *metering installations in settlements* and, in accordance with the *B2B Procedures*, make that information available on request to:

- (a) the *financially responsible Market Participant* for any *child connection point* on the *embedded network* or that *Market Participant's Metering Provider*; or
- (b) any *Market Participant* to whom *financial responsibility* for any such *child connection point* is to be transferred or that *Market Participant's proposed Metering Provider*.

7.16.7 Guide to embedded networks

AEMO must develop and *publish a guide to embedded networks* addressing, without limitation:

- (a) exemptions granted by the *AER* under section 13(3) of the *National Electricity Law* and clause 2.5.1(d) in respect of *embedded networks*;
- (b) which *retailers* and other persons are able to sell electricity to consumers whose premises are *supplied* with electricity conveyed through *embedded networks*; and
- (c) the roles, responsibilities and obligations of *Embedded Network Managers* under the *Rules* and procedures authorised under the *Rules*.

Schedule 7.7 Embedded Network Managers

S7.7.1 General

- (a) An *Embedded Network Manager* must be accredited and registered by *AEMO*.
- (b) *AEMO* must establish a qualification process for *Embedded Network Managers* that enables accreditation and registration to be achieved in accordance with the requirements of this schedule 7.7.
- (c) An *Embedded Network Manager* must ensure that *embedded network management services* are carried out in accordance with the *Rules* and procedures authorised under the *Rules*.

S7.7.2 Capabilities of Embedded Network Managers

Embedded Network Managers must be able to exhibit to the reasonable satisfaction of *AEMO* the following capabilities:

- (a) Detailed understanding of the *Rules* including this Chapter 7, and all procedures authorised under the *Rules* including the *ENM service level procedures*.
- (b) Detailed understanding of:
 - (1) the terms and conditions on which the *AER* grants exemptions under section 13 of the *National Electricity Law* to persons who engage in the activity of owning, controlling or operating *embedded networks*; and
 - (2) any related guidelines developed and issued by the *AER* under clause 2.5.1.

- (c) Detailed understanding of the participant role relationships and obligations that exist between *Embedded Network Managers, Metering Data Providers, Metering Providers, financially responsible Market Participants, Local Network Service Providers, AEMO and responsible persons.*
- (d) The establishment of a 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 *EN wiring information*;
 - (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*.
- (e) Understanding of the required logical interfaces necessary to support the provision of *embedded network management services* including the interfaces needed to:
 - (1) access *AEMO's* systems;
 - (2) support the *metrology procedure, B2B Procedures and Market Settlement and Transfer Solution Procedures.*

8. Administrative Functions

8.2.1 Application and guiding principles

...

- (a1) For the purposes of this rule 8.2 only, "**Registered Participant**" is deemed to include not just *Registered Participants* but also *AEMO, Connection Applicants, Metering Providers, Metering Data Providers, Embedded Network Managers* and *NMAS providers* (including *NSCAS preferred tenderers*) who are not otherwise *Registered Participants*, except that this will not be the case where the term "*Registered Participant*":
 - (1) is used in clauses 8.2.2(b)(4), 8.2.2(d), 8.2.3(a), 8.2.3(b)(5) and 8.2.5(e); or
 - (2) first occurs in clauses 8.2.3(b), 8.2.3(b)(3), 8.2.3(b)(4) or 8.2.3(c); or
 - (3) last occurs in clauses 8.2.4(a) or 8.2.9(c).

...

- (h) Rule 8.2 does not apply to:

...

- (11) a decision by *AEMO* whether or not to deregister a *Metering Provider*, ~~or~~ *Metering Data Provider* or *Embedded Network Manager* under clause 7.4.3(~~c~~) or clause 7.16.4(d) or to suspend a *Metering Provider*, ~~or~~ *Metering Data Provider* or *Embedded Network Manager* from a category of registration under clause 7.4.3(c) or clause 7.16.4(d) or to impose agreed constraints on the continued operation of a *Metering Provider*, ~~or~~ *Metering Data Provider* or *Embedded Network Manager*;

...

10. Glossary

child connection point

The agreed point of supply between an embedded network and an electrical installation, generating unit or other embedded network connected to that embedded network.

connection point

The agreed point of supply established between Network Service Provider(s) and another Registered Participant, Non-Registered Customer or franchise customer and, in respect of an embedded network, the parent connection point and a child connection point.

distribution network connection point

A connection point on a distribution network.

Distribution Network Service Provider

Subject to clause 3.6.3(k), a person who engages in the activity of owning, controlling, or operating a distribution system.

embedded network

A distribution network forming part of the national grid which is not a Network Service Provider's distribution network.

embedded network management services

Services that involve carrying out the roles, discharging the responsibilities and complying with the obligations of an Embedded Network Manager under the Rules and procedures authorised under the Rules.

Embedded Network Manager

A person:

- (a) who meets the requirements listed in schedule 7.7 and has been accredited and registered by AEMO as, an Embedded Network Manager or who is deemed under clause 11.68.2(a) to have been accredited and registered by AEMO as an Embedded Network Manager; and
- (b) who has not been deregistered by AEMO as an Embedded Network Manager under clause 7.16.4(d).

EN information

The information about an embedded network an Embedded Network Manager is required to maintain under clause 7.16.6.

ENM service level procedures

The procedures established by AEMO in accordance with clause 7.16.3.

Exempt Embedded Network Service Provider

A person who engages in the activity of owning, controlling or operating an embedded network under an exemption granted by the AER under section 13 of the National Electricity Law and clause 2.5.1(d)

NMI Standing Data

The following data in respect of a connection point:

-
- (a) the *NMI* of the *connection point* and the street address of the relevant *connection point* to which that *NMI* is referable;
 - (b) the *NMI* checksum for the *connection point*;
 - (c) the identity of the *Local Network Service Provider* or, if the *connection point* is a *child connection point on an embedded network*, of the *Embedded Network Manager* and the *Exempt Embedded Network Service Provider*;
 - (d) the code (known as a *TNI*) identifying the relevant *transmission node* which identifies the *transmission loss factor* and/or *transmission use of system charge* for the *connection point* and, if the *connection point* is a *child connection point in an embedded network*, the *NMI* of the *parent connection point* on that *embedded network*;
 - (e) the relevant *distribution loss factor* applicable to the *connection point*;
 - (f) the Network Tariff (identified by a code) applicable in respect of the *connection point*;
 - (g) the *NMI* classification code (as set out in the *Market Settlement and Transfer Solution Procedures*) of the *connection point*;
 - (h) the read cycle date, or date of next scheduled read or date in a relevant code representing the read cycle date or date of next scheduled read, for that *connection point*;
 - (i) the profile type applicable to the *connection point*; and
 - (j) such other categories of data as may be referred to in the *Market Settlement and Transfer Solution Procedures* as forming *NMI Standing Data*,

and, for the avoidance of doubt, does not include any *metering data* or other details of an end-user's consumption at that *connection point*.

parent connection point

The point of supply between an *embedded network* and the *Network Service Provider's network* or other network to which the *embedded network* is connected.

Registered Participant

A person who is registered by *AEMO* in any one or more of the categories listed in rules 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 rule 2.5A). However, as set out in clause 8.2.1(a1), for the purposes of some provisions of rule 8.2 only, *AEMO*, *Connection Applicants*, *Metering Providers*, ~~and~~ *Metering Data Providers* and *Embedded Network Managers* who are not otherwise *Registered Participants* are also deemed to be *Registered Participants*.

11. Savings and Transitional Rules

Part ZZB Embedded Network Managers

11.68 Rules consequential on the making of the National Electricity Amendment (Embedded Network Managers) Rule 2014

11.68.1 Definitions

In this rule 11.68:

Amending Rule means the National Electricity Amendment (Embedded Network Manager) Rule 2014.

Amending Rule commencement date means the date of commencement of the Amending Rule.

11.68.2 Market Customers and Network Service Providers as Embedded Network Managers

(a) Any person who:

(1) on the Amending Rule commencement date is registered by AEMO as a Market Customer or as a Network Service Provider; and

(2) within 6 months after the Amending Rule commencement date gives AEMO a notice under this clause 11.68.2 stating it wishes to be accredited and registered as an Embedded Network Manager,

is on the giving of that notice deemed to be accredited and registered by AEMO as an Embedded Network Manager.

(b) Clause 11.68.2(a) does not preclude AEMO from deregistering, suspending or constraining a Market Customer or a Network Service Provider as an Embedded Network Manager under clause 7.16.4(d).

11.68.3 Amendments of the metrology procedure and the Market Settlement and Transfer Solution Procedures and changes to the B2B Procedures

(a) As soon as practicable after the Amending Rule commencement date, AEMO must change the metrology procedure and the Market Settlement and Transfer Solution Procedures to take into account the Amending Rule.

(b) As soon as practicable after the Amending Rule commencement date, the Information Exchange Committee must recommend a change to the B2B Procedures to take into account the Amending Rule.

(c) If, prior to the Amending Rule commencement date and for the purposes of developing changes to the metrology procedure, the Market Settlement and Transfer Solution Procedures or the B2B Procedures in anticipation of the Amending Rule, AEMO or (in the case of the B2B Procedures) the Information Exchange Committee, undertook a consultation, step, decision or action equivalent to that required in the Rules consultation procedures or otherwise under the Rules, then that consultation, step, decision or action is taken to satisfy the equivalent consultation, step, decision or action under the Rules consultation procedures or otherwise under the Rules.

11.68.4 ENM service level procedures

- (a) As soon as practicable after the Amending Rule commencement date, AEMO must establish and publish the ENM service level procedures in accordance with the Amending Rule.
- (b) If, prior to the Amending Rule commencement date, and for the purposes of establishing the ENM service level procedures in anticipation of the Amending Rule, AEMO undertook a consultation or step equivalent to that as required in the Rules consultation procedures, then that consultation or step is taken to satisfy the equivalent consultation or step under the Rules consultation procedures.
- (c) If, prior to the Amending Rule commencement date and in anticipation of the Amending Rule, AEMO made a decision or took an action, that decision or action is taken to satisfy the equivalent decision or action under the Rules.