Indicative markup of the National Electricity Rules showing changes made by the National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021.

Note:

This is an indicative consolidated version of the National Electricity Rules as amended by the National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021. It includes a markup of amendments made to relevant extracts of Chapters 4, 5, 5A, 6, 6A and 10 of version 159 of the National Electricity Rules. Only extracts of the relevant Chapters are provided in order to reduce the size of the document. Complete and current versions of the official NER should be viewed on the AEMC's website.

This document is provided for information purposes only. The Australian Energy Market Commission does not guarantee the accuracy, reliability or completeness of this indicative consolidated version of the National Electricity Rules.

Table of Contents

CHAPTER 4

4. Power System Security

4.2 Definitions and Principles

This rule sets out certain definitions and concepts that are relevant to this Chapter.

4.2.6 General principles for maintaining power system security

The *power system security* principles are as follows:

(a) To the extent practicable, the *power system* should be operated such that it is and will remain in a *secure operating state*.

(b) Following a *contingency event* (whether or not a *credible contingency event*) or a significant change in *power system* conditions, *AEMO* should take all reasonable actions:

(1) to adjust, wherever possible, the operating conditions with a view to returning the *power system* to a *secure operating state* as soon as it is practical to do so, and, in any event, within thirty minutes; or

(2) if any principles and guidelines have been *published* under clause 8.8.1(a)(2a), to adjust, wherever possible, the operating conditions, in accordance with such principles and guidelines, with a view to returning the *power system* to a *secure operating state* within at most thirty minutes.

(c) *Emergency frequency control schemes* should be available and in service to:

(1) restore the *power system* to a *satisfactory operating state* following *protected events*; and

(2) significantly reduce the risk of *cascading outages* and *major supply disruptions* following significant multiple *contingency events*.

(d) **[Deleted]**

(e) Sufficient *SRASs* should be available in accordance with the *system restart standard* to allow the restoration of *power system security* and any necessary restarting of *generating units* following a *major supply disruption*.

(f) Sufficient *inertia* should be available in each *inertia sub-network* to meet the applicable *inertia requirements*.

(g) Sufficient *three phase fault level* should be maintained at each *system strength node* ~~*fault level node*~~ to meet the applicable *system strength requirements*.

4.4 Power System Frequency Control

4.4.5 Instructions to enable system strength services

(a) *AEMO* may at any time *enable* a range and quantity of *system strength services* to maintain the minimum *three phase fault level* at a *system strength node* ~~*fault level node*~~ when the *three phase fault level* at the *system strength node* ~~*fault level node*~~ would otherwise be below the minimum *three phase fault level* or when reasonably considered necessary by *AEMO* to maintain the *power system* in a *secure operating state*.

(b) In selecting the *system strength services* to be *enabled* under paragraph (a), *AEMO* must use reasonable endeavours to select services in the order of priority specified by the *System Strength Service Provider* in its schedule of *system strength services* given to *AEMO* under clause 5.20C.4(a).

(c) For the purposes of paragraph (a), *AEMO* may at any time give an instruction to a *System Strength Service Provider* who is providing *system strength services* or a *Registered Participant* who has agreed with a *System Strength Service Provider* to provide *system strength services* stating that *AEMO* requires *system strength services* to be *enabled*. Where the *system strength services* are provided by a *system strength generating unit*, the instruction must be given in accordance with the procedures for giving *dispatch instructions* under the *Rules*. Otherwise, the instruction must be given in accordance with the arrangements for giving instructions applicable to the *system strength service* approved by *AEMO* under clause 5.20C.4(e).

(d) *AEMO* may at any time give an instruction stating that *AEMO* requires the provision of a *system strength service* to cease. The instruction must be given in the manner provided for in paragraph (c).

(e) An instruction to *enable* or cease providing *system strength services* must include:

(1) specific reference to the *system strength service* to which the instruction applies;

(2) the time the instruction is issued; and

(3) the time at which the service is to be *enabled* or cease, if that is different from the time the instruction is issued.

(f) A *System Strength Service Provider* or a *Registered Participant* providing *system strength services* must comply with an instruction given under paragraph (c) or (d).

Note

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

(g) A *System Strength Service Provider* or a *Registered Participant* providing *system strength services* must ensure that appropriate personnel or electronic facilities are available at all times to receive and immediately act upon instructions issued by *AEMO* to enable the *system strength service* or cease providing it.

Note

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

4.6 Protection of Power System Equipment

4.6.1 Power system fault levels

(a) *AEMO*, in consultation with *Network Service Providers*, must:

(1) determine the fault levels at all *busbars* of the *power system* as described in clause 4.6.1(b); and

(2) determine the *three phase fault level* at *system strength nodes*~~*fault level nodes*~~.

(b) *AEMO* must ensure that there are processes in place that will allow the determination of fault levels for normal operation of the *power system* and in anticipation of all *credible contingency events* and *protected events* that *AEMO* considers may affect the configuration of the *power system*, so that *AEMO* can identify:

(1) any *busbar* which could potentially be exposed to a fault level which exceeds the fault *current ratings* of the circuit breakers associated with that *busbar*; and

(2) any *system strength node* ~~*fault level node*~~ where the *three phase fault level* is likely to be below the minimum *three phase fault level*.

4.6.6 System strength impact assessment guidelines

(a) *AEMO* must make, publish ~~*publish*~~ and may amend *system strength impact assessment guidelines* that ~~set out~~:

(1) in accordance with paragraph (b), set out the methodology to be used by *Network Service Providers* when undertaking *system strength impact assessments* under clause 5.3.4B and calculating a *system strength locational factor*;~~in relation to a proposed new *connection* of a *generating system* or *market network service facility* or an alteration to a *generating system* to which clause 5.3.9 applies.~~

(2) define, and provide guidance on the calculation of, *available fault levels* at *system strength nodes* including for the purposes of forecasts under clause 5.20C.3(f)(3) and for the calculation of the *system strength locational factor* for a *connection point*;

(3) prescribe, for clauses S5.2.5.15(b), S5.3.11(b) and S5.3a.7(b), the methodology for assessing the *short circuit ratio*;

(4) provide guidance on the information that must be provided to demonstrate compliance with the *minimum access standard* in clause S5.2.5.15(b), clause S5.3.11(b) or clause S5.3a.7(b) (as applicable), or if the procedures in clause 5.3.4A have been followed, the relevant *negotiated access standard*;

(5) prescribe, for the purposes of the definition of *inverter based load* in Chapter 10, the criteria for classification of a *load* as an *inverter based load*;

(6) prescribe, for the purposes of the definition of *large inverter based resource* in Chapter 10, the criteria for classification of an *inverter based resource* as a *large inverter based resource* which must take into account *plant* type and size and other matters *AEMO* considers relevant to identifying *inverter based resources* that may have a *general system strength impact* above the threshold referred to in subparagraph (b)(7);

(7) describe how *AEMO* assesses *adverse system strength impacts*; and

(8) provide guidance on the methodology to be used by *Network Service Providers* when undertaking modelling to verify the stability of *plant* in accordance with clause 5.3.4B(a2)(4).

(b) For subparagraph (a)(1), the ~~The~~ *system strength impact assessment guidelines* must:

(1) provide for a two-stage assessment process comprising:

(i) a preliminary assessment to screen for the need for a full assessment and calculate the applicable *system strength locational factor*; and

(ii) a full assessment to be used in the circumstances described in clause 5.3.4B(a2)(3);

(1A) require the preliminary assessment to be carried out using a simple~~y~~ isolated model such as a single machine infinite bus model;

(2) require the full assessment to be carried out using a *power system* model that is reasonably appropriate for conducting *system strength impact assessments* and applicable to the location the *transmission network* or *distribution network* at which the *facility* is or may be *connected* and specified by *AEMO* from time to time for this purpose;

(3) exclude from the assessment of the *general system strength impact* ~~an *adverse system strength impact*~~ the impact on any *protection system* for a *transmission network* or *distribution network*;

(4) provide guidance about the different *network* conditions and *dispatch* patterns and other relevant matters that should be examined when undertaking a full assessment;

(5) specify the nature of the impacts that *AEMO* considers to be *general system strength impacts* ~~*adverse system strength impacts* and that must be avoided or overcome by undertaking *system strength connection works* or implementing a *system strength remediation scheme* in accordance with~~ for the purposes of clause 5.3.4B;

(6) provide guidance about the matters that must be considered when determining whether a *connection* or alteration will result in a *general system strength impact*~~an *adverse system strength impact*~~;

(7) include if applicable any thresholds below which an impact may be disregarded ~~when determining the need for a *system strength remediation scheme* or *system strength connection works* under~~for the purposes of clause 5.3.4B(f)(3); ~~and~~

(8) provide general guidance about options for *system strength remediation schemes* and *system strength connection works*~~.~~;

(9) specify a methodology for calculation of the *system strength locational factor* for a *connection point*, which must be representative of the impedance between the *connection point* and the applicable *system strength node* and must use *available fault level* as the basis for the methodology; and

(10) provide guidance about the circumstances in which a *system strength locational factor* is not reasonably able to be determined or would be manifestly excessive.

Example

Where the *system strength locational factor* tends to infinity, or where it would result in a *system strength charge* that could not reasonably be expected to be paid in preference to *system strength connection works* or a *system strength remediation scheme*.

(c) Subject to paragraph (d), *AEMO* must comply with the *Rules consultation procedures* when making or amending the *system strength impact assessment guidelines*.

(d) *AEMO* may make minor or administrative amendments to the *system strength impact assessment guidelines* without complying with the *Rules consultation procedures*.

(e) *AEMO* must provide the model referred to in subparagraph (b)(2) to a *Local Network Service Provider* or, subject to paragraph (f), to a person seeking a *connection* or proposing to alter *connected plant* referred to in clause 5.3.4B(a) ~~*Generator or Connection Applicant*~~ who requests the model in connection with a *system strength impact assessment*.

(f) If *AEMO* receives a request under paragraph (e) from a person seeking a *connection* or proposing to alter *connected plant* referred to in clause 5.3.4B(a)~~*Generator or a Connection Applicant*~~:

(1) *AEMO* must treat the request as if it were information reasonably required by a *Registered Participant* under clause 3.13.3(k)(2) and *AEMO* is only required to provide the model referred to in subparagraph (b)(2) (or the source code for that model) in the form contemplated by clause 3.13.3(l)(2); and

(2) *AEMO* may require a *Connection Applicant* who is not a *Registered Participant* to give an undertaking in a form satisfactory to *AEMO* to comply with rule 8.6 as if the *Connection Applicant* were a *Registered Participant* as a condition of providing a model to the *Connection Applicant* under paragraph (e).

CHAPTER 5

5. Network Connection Access, Planning and Expansion

Part A Introduction

5.1 Introduction to Chapter 5

5.1.2 Overview of Part B and connection and access under the Rules

(a) Rule 5.1A sets out the purpose, application and principles for Part B.

(b) Rule 5.2 sets out the obligations of *Registered Participants* under Part B and other relevant Parts of this Chapter 5.

(c) Rule 5.2A sets out obligations and principles relevant to *connection* and access to *transmission networks* and *designated network assets*. This includes the classification of certain services relating to assets relevant to *connection* as *prescribed transmission services*, *negotiated transmission services* and *non-regulated transmission services*. Rule 5.2A does not apply to the *declared transmission system* of an *adoptive jurisdiction*.

(d) Rules 5.3, 5.3A and 5.3AA and Chapter 5A set out processes by which *Connection Applicants* can negotiate for connection and access to the *national grid* from a *Network Service Provider*. The process applicable will depend on the nature of the application. For illustrative purposes only, the table below sets out an overview of the relevant processes:

	Connection Applicant	Process
1	A *Registered Participant* or a person intending to become a *Registered Participant* for a *generating plant connecting* to a *transmission network*	Rule 5.3 applies If the person is *connecting* to part of a *transmission network* which is a *designated network asset*, then rule 5.3 applies subject to the relevant *access policy* (see clause 5.2A.8)
2	A *Registered Participant* or a person intending to become a *Registered Participant* (or a person pursuant to clause 5.1A.1(c)) for a *load connecting* to a *transmission network*	Rule 5.3 applies If the person is *connecting* to part of a *transmission network* which is a *designated network asset*, then rule 5.3

	Connection Applicant	Process
		applies subject to the relevant *access policy* (see clause 5.2A.8)
3	A *load connecting* to a *distribution network* where the *Connection Applicant* is a *Registered Participant* or a person intending to become a *Registered Participant* (and is not acting as the agent of a *retail customer*)	Rule 5.3 applies
4	A *distribution network* (including an *embedded network*) *connecting* to another *distribution network* or to a *transmission network* where the *Connection Applicant* is a *Registered Participant*, intending to become a *Registered Participant* or will obtain an exemption from registration	Rule 5.3 applies
5	A *Market Network Service Provider* or person intending to register as one seeking *connection* to a *distribution network* or a *transmission network*	Rule 5.3 applies
6	An *embedded generating unit connecting* to a *distribution network* where the *Connection Applicant* is a *Registered Participant* or a person intending to become a *Registered Participant* or a person seeking *connection* for a *large inverter based resource*	Rules 5.3 and 5.3A apply (see clause 5.3.1A for the interaction between the two rules)
7	A *non-registered embedded generator* who makes an election for rule 5.3A to apply instead of Chapter 5A	Rules 5.3 and 5.3A apply (see clause 5.3.1A for the interaction between the two rules)
8	A *Generator* wishing to alter a *connected generating plant* in the circumstances set out in clause 5.3.9	Clause 5.3.9 applies
8A	A *Network User* wishing to alter *connected plant* in the circumstances set out in clause 5.3.12	Clause 5.3.12 applies
9	A *Connection Applicant* for *prescribed transmission services* or *negotiated transmission services* that do not require the establishment or modification of a *connection* or alteration of a *connected generating plant* in the circumstances set out in clause 5.3.9 or	Rule 5.3 applies as modified by clause 5.2A.3(c)

	Connection Applicant	Process
	alteration of *connected plant* in the circumstances set out in clause 5.3.12	
10	An *Embedded Generator* or *Market Network Service Provider* applying for *distribution network user access*	Rule 5.3 or 5.3A (as applicable) and rule 5.3AA apply
11	A *load* or *generating plant connecting* to a *declared shared network*	Rule 5.3 as modified by clause 5.1A.1(d) to (g) and rule 5.3B apply
12	A *load connecting* to a *distribution network* where the *Connection Applicant* is not a *Registered Participant* and is not intending to become a *Registered Participant* (unless it is acting as the agent of a *retail customer*) and is not *connecting* a *large inverter based resource* A *non-registered embedded generator* who does not make an election for Rule 5.3A to apply instead of Chapter 5A	Chapter 5A applies
13	A *retail customer* (or a *retailer* or *Market Small Generation Aggregator* on behalf of that customer) *connecting* a *micro embedded generator* to a *distribution network*	Chapter 5A applies

(e) In addition to the rules referred to in paragraph (d), in relation to *connection* and access to a *distribution network*:

(1) a *Distribution Network Service Provider* must comply with its *negotiating framework* and *Negotiated Distribution Service Criteria* when *negotiating the terms and conditions of access* to *negotiated distribution services*;

(2) disputes relating to the *terms and conditions of access* to a *direct control service* or to a *negotiated distribution service*, *access charges* or matters referred to in clause 5.3AA(f) (*negotiated use of system charges*) or 5.3AA(h) (avoided charges for the locational component of *prescribed TUOS services*) may be referred to the *AER* in accordance with Part L of Chapter 6;

(3) Part G of Chapter 5A provides for dispute resolution by the *AER* for certain disputes under Chapter 5A; and

(4) other disputes relating to *connection* and access may be subject to dispute resolution under rule 8.2.

(f) In addition to the rules referred to in paragraph (d), in relation to *connection* and access to a *transmission network*:

(1) schedule 5.11 sets out the negotiating principles which apply to negotiations between a *Transmission Network Service Provider* and a *Connection Applicant* for *negotiated transmission services*;

(2) rule 5.4 provides a framework for *Connection Applicants* and *Transmission Network Service Providers* to appoint an *Independent Engineer* to provide advice on certain technical matters; and

(3) rule 5.5 provides for commercial arbitration of disputes between a *Transmission Network Service Provider* and a *Connection Applicant* as to *terms and conditions of access* for the provision of *prescribed transmission services* or for the provision of *negotiated transmission services*.

(g) Part B also provides for an owner of a *designated network asset* to have an *access policy* for a *designated network asset* and for commercial arbitration under rule 5.5 to apply to a *DNA services access dispute*.

Part B Network Connection and Access

5.2 Obligations

5.2.3A Obligations of Market Network Service Providers

(a) If in *AEMO*'s reasonable opinion, there is a risk a *Market Network Service Provider*'s *plant* or equipment will:

(1) adversely affect *network capability*, *power system security*, quality or reliability of *supply*, *inter-regional power transfer capability*;

(2) adversely affect the use of a *network* by a *Network User*; or

(3) have an *adverse system strength impact*,

AEMO may request the *Market Network Service Provider* to provide information of the type described in clause S5.3a.1(a1), and following such a request, the *Market Network Service Provider* must provide the information to *AEMO* and the relevant *Network Service Provider*(s) in accordance with the requirements and circumstances specified in the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(b) If in *AEMO*'s reasonable opinion, information of the type described in clause S5.3a.1(a1) is required to enable a *Network Service Provider* to conduct the assessment required by clause 5.3.4B, *AEMO* may request a *Market Network Service Provider* to provide the information, and following such a request, the *Market Network Service Provider* must provide the information to *AEMO* and the relevant *Network Service Provider*.

Note

This paragraph is classified as a tier 2 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) All information provided to *AEMO* and the relevant *Network Service Provider*(s) under paragraphs (a) and (b) must be treated as *confidential information* by those recipients.

(d) A *Market Network Service Provider* must comply with any terms and conditions of a *connection agreement* for its *connected plant* that provide for the implementation, operation, maintenance or performance of a *system strength remediation scheme*.

5.2.4 Obligations of customers

(a) Each *Customer* must plan and design its *facilities* and ensure that its *facilities* are operated to comply with:

(1) its *connection agreement* with a *Network Service Provider*;

(2) subject to clause 5.2.4(a)(1), all applicable *performance standards*; and

(3) subject to clause 5.2.4(a)(2), the *system standards*.

Note

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

(b) A *Customer* must:

(1) submit an *application to connect* in respect of new or altered equipment owned, operated or controlled by the *Customer* and enter into a *connection agreement* with a *Network Service Provider* in accordance with rule 5.3 prior to that equipment being *connected* to the *network* of that *Network Service Provider* or altered (as the case may be);

(2) comply with the reasonable requirements of the relevant *Network Service Provider* in respect of design requirements of equipment proposed to be *connected* to the *network* of that *Network Service Provider* in accordance with rule 5.6 and schedule 5.3;

(3) provide *load* forecast information to the relevant *Network Service Provider* in accordance with Part D of Chapter 5;

(4) permit and participate in inspection and testing of *facilities* and equipment in accordance with rule 5.7;

(5) permit and participate in commissioning of *facilities* and equipment which are to be *connected* to a *network* for the first time in accordance with rule 5.8; and

(6) **[Deleted]**

(7) give notice of any intended voluntary permanent *disconnection* in accordance with rule 5.9.

(c) If in *AEMO*'s reasonable opinion, there is a risk that a *Customer*'s *plant* will:

(1) adversely affect *network capability*, *power system security*, quality or reliability of *supply*, *inter-regional power transfer capability*;

(2) adversely affect the use of a *network* by a *Network User*; or

(3) have an *adverse system strength impact*,

AEMO may request a *Customer* to which Schedule 5.3 applies to provide information of the type described in clause S5.3.1(a1), and following such a request, the *Customer* must provide the information to *AEMO* and the relevant *Network Service Provider*(s) in accordance with the requirements and circumstances specified in the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(d) If in *AEMO*'s reasonable opinion, information of the type described in clause S5.3.1(a1) is required to enable a *Network Service Provider* to conduct the assessment required by clause 5.3.4B, *AEMO* may request a *Customer* to which Schedule 5.3 applies, to provide the information, and following such a request, the *Customer* must provide the information to *AEMO* and the relevant *Network Service Provider*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(e) All information provided to *AEMO* and the relevant *Network Service Provider*(s) under paragraphs (c) and (d) must be treated as *confidential information* by those recipients.

(f) A *Customer* must comply with any terms and conditions of a *connection agreement* for its *connected plant* that provide for the implementation, operation, maintenance or performance of a *system strength remediation scheme*.

5.2A Transmission network connection and access

5.2A.2 Relevant assets

(a) The assets relevant to *connection* and access to the *transmission network* and the person who is registered for those assets are set out in the following table:

	Asset	Registered Person
1	primary *transmission network* in the *participating jurisdictions*.	*Primary Transmission Network Service Provider*
2	*identified user shared asset* or *designated network asset* owned by the *Primary*	*Primary Transmission Network Service Provider*

	Asset	Registered Person
	Transmission Network Service Provider	(forms part of that provider's broader *transmission network*)
3	*third party IUSA* or *designated network asset* not owned by the *Primary Transmission Network Service Provider*	*Primary Transmission Network Service Provider* (as controller and operator of the *third party IUSA* and *designated network asset* under a *network operating agreement*) (forms part of that provider's broader *transmission network*)
4	*dedicated connection asset*	If owned, operated or controlled by a *Primary Transmission Network Service Provider* (forms part of that provider's broader *transmission system*) For a *dedicated connection asset* that is not owned, operated or controlled by a *Primary Transmission Network Service Provider*, that asset forms part of the asset owner's *facility*.
5	*network connection asset*	*Transmission Network Service Provider*
6	*facility* of a *Transmission Network User*	*Transmission Network User* (if registration required or obtained)

(b) This clause sets out an overview of the framework relating to the ownership of, and *connection* and access to, a *designated network asset*:

(1) a *designated network asset* is for the benefit of specific *Transmission Network Users* and subject to subparagraph (b)(8), a *Primary Transmission Network Service Provider* is not entitled to receive a charge for a *designated network asset* under Chapter 6A;

(2) a *designated network asset* forms part of the *Primary Transmission Network Service Provider's transmission network*;

(3) a *designated network asset* may be owned by persons other than the *Primary Transmission Network Service Provider*;

(4) there may be multiple *designated network assets* owned by different persons behind a *boundary point*, who will have an *access policy* for each *designated network asset* and a *network operating agreement* with the *Primary Transmission Network Service Provider* for each *designated network asset*;

(5) if the *Primary Transmission Network Service Provider* does not own a *designated network asset*, the *Primary Transmission Network Service*

Provider controls, operates and maintains (in accordance with table 5.2A.4) that *designated network asset* as part of its *transmission network* under the relevant *network operating agreement*;

(6) *connection* to a part of a *transmission network* that comprises one or more *designated network assets* is:

(i) in accordance with Chapter 5, and

(ii) subject to confirmation, for each *designated network asset* that is located between the *Connection Applicant's* proposed *connection point* and the *boundary point*, that the owner of that *designated network asset* has granted access to the *Connection Applicant* to that asset in accordance with the relevant *access policy*; ~~and~~

(7) all services relating to access to a *designated network asset* will be provided by the owner of that *designated network asset*, in accordance with the relevant *access policy*. The *Primary Transmission Network Service Provider* will provide the functional specifications and undertake operation and maintenance for a *designated network asset* as a *negotiated transmission service*; and~~.~~

Note

For example, an *identified user shared asset connects* a *dedicated connection asset* to, or provides the interface for a *designated network asset* with, a part of the *transmission network* that provides *prescribed transmission services*. An *identified user shared asset* is subject to *connection* and access under Chapter 5. However, a person seeking to *connect* to a part of the *transmission network* that is a *designated network asset* is subject to the *connection* and access requirements under Chapter 5 and the relevant *access policy*.

(8) a *Primary Transmission Network Service Provider* may charge or pass through *system strength charges* in accordance with this Chapter 5 and Chapter 6A.

5.2A.3 Connection and access to transmission services

(a) The following *transmission services* are relevant to *connection* and access to the *transmission network*:

	Service classification	TNSP obligations in respect of the services
1	*prescribed transmission services*	Subject to *connection* and access under Chapter 5 and economic regulation under Chapter 6A
2	*negotiated transmission services*	Subject to *connection* and access under Chapter 5
3	*non-regulated transmission services*	Not subject to *connection* and access under Chapter 5 or economic regulation under Chapter 6A

	Service classification	TNSP obligations in respect of the services
		(*DNA service*s are subject to access under the *access policy* established by the owner of that *designated network asset*)

(b) A *Connection Applicant* may apply to a *Transmission Network Service Provider* for provision of a *prescribed transmission service* or a *negotiated transmission service* in accordance with rule 5.3 and the relevant *Transmission Network Service Provider* must comply with this Chapter 5 in negotiating a *connection agreement* or *network operating agreement* for the requested service.

(c) If the *prescribed transmission service* or *negotiated transmission service* sought under paragraph (b) does not require the *Connection Applicant* to establish or modify a *connection* or alter a *generating plant* in the circumstances set out in clause 5.3.9 or alter other *plant* in the circumstances set out in clause 5.3.12, the processes in rules 5.3, 5.4 and 5.5 will apply with such modifications as is appropriate to the nature of the service requested.

(d) A *Transmission Network Service Provider* must provide *prescribed transmission services* or *negotiated transmission services* on *terms and conditions of access* that are consistent with the requirements of Chapters 4, 5 and 6A of the *Rules* (as applicable).

(d1) A *Connection Applicant* may:

(1) for *connection* to a *designated network asset*, apply to the *Primary Transmission Network Service Provider* in accordance with rule 5.3; and

(2) for access to *DNA services*, apply to an owner of a *designated network asset* in accordance with the relevant *access policy*.

(e) A *Transmission Network Service Provider* or a person who is provided *prescribed transmission services* or *negotiated transmission services* must not engage in conduct for the purpose of preventing or hindering access to those services.

Note

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

(f) The *Connection Applicant* may terminate negotiations with the *Transmission Network Service Provider* at any time during the *connection* process provided under rules 5.3 and 5.3A with at least three *business days'* prior written notice.

(g) A *Transmission Network Service Provider* may terminate negotiations with the *Connection Applicant* with at least three *business days*' prior written notice if:

(1) the *Connection Applicant* becomes insolvent or an equivalent event occurs;

(2) the *Connection Applicant* has, in the *Transmission Network Service Provider's* reasonable opinion, provided false or misleading information;

(3) the *Transmission Network Service Provider* has reasonable grounds to believe that the *Connection Applicant* is not negotiating in good faith; or

(4) the *Transmission Network Service Provider* has formed the reasonable opinion that the *Connection Applicant* does not intend to obtain the service.

5.2A.7 Third party owned network assets and network operating agreements

Definitions

(a0) This clause applies only to a *third party IUSA* and *designated network asset* that is not owned or leased by the *Primary Transmission Network Service Provider* (**third party owned network asset**).

(a) A person must not commission, or permit the commissioning of, a third party owned network asset unless there is a *network operating agreement* between the owner of that third party owned network asset and the *Primary Transmission Network Service Provider*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(b) The person who owns or is intending to own a third party owned network asset and the *Primary Transmission Network Service Provider* must:

(1) include terms and conditions in the *network operating agreement* which give effect to the requirements of paragraphs (c) and (d);

(2) include terms and conditions in the *network operating agreement* of the kind set out in Part B of schedule 5.6; and

(3) negotiate the *network operating agreement* in accordance with the *negotiating principles* and negotiating principles in schedule 5.12 (where applicable).

(c) The term of the *network operating agreement* must be for a period which is at least equal to the term of the longest *connection agreement* of a member of the initial *identified user group* for the third party owned network asset..

(d) The *network operating agreement* must provide for the *Primary Transmission Network Service Provider* to:

(1) have operation and control of the third party owned network asset (including the rights and obligations to maintain that asset) for an agreed charge or based on an agreed charging methodology;

(2) [**Deleted**]

(3) alter, replace or augment the third party owned network asset but in the case of a *designated network asset*, only to the extent that such activities are necessary for the operation and maintenance of the *designated*

network asset or in connection with the provision of *prescribed transmission services*;;

(4) have the right to connect other persons to the third party owned network asset in accordance with the *Rules*;

(5) have unrestricted use of, and access to, the third party owned network asset in accordance with the *Rules;* and

(6) treat the third party owned network asset as forming part of the *Primary Transmission Network Service Provider's transmission network* in all material respects and provide *transmission services* to a *Transmission Network User* in accordance with the *Rules*; and

(7) distribute to or recover from the owner of the *designated network asset* any *settlements residue* accrued on the *designated network asset* in accordance with the methodology set out in the *network operating agreement*.

(e)

[**Deleted**]

Note

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

5.3 Establishing or Modifying Connection

5.3.1 Process and procedures

(a) For the purposes of this rule 5.3:

(1) **establish a connection** includes:

(i) modify an existing *connection* or alter *plant* but does not include alterations to *plant* ~~*generating plant*~~ in the circumstances set out in clause 5.3.9 or clause 5.3.12; or

(ii) incorporating a *designated network asset* into a *transmission network*.

(2) **connect** includes the incorporation of a *designated network asset* into a *transmission network*.

(b) Subject to paragraph (b1), a *Registered Participant* or person intending to become a *Registered Participant* who wishes to *establish a connection* to a *network* must follow the procedures in this rule 5.3.

(b1) If a *Registered Participant*, or person intending to become a *Registered Participant*, wishes to establish a *connection* to a part of a *network* that is a *designated network asset* either through a *dedicated connection asset* or by way of a new *designated network asset*, then:

(1) for *connection*, the process in rule 5.3 applies; and

(2) for access to *DNA services* from the existing *designated network asset*, the access is governed by the relevant *access policy* that applies.

(c) A *Generator* wishing to alter *connected generating plant* must comply with clause 5.3.9 and a *Network User* or *Market Network Service Provider* to whom clause 5.3.12 applies must comply with clause 5.3.12.

(d) *AEMO* must comply with clause 5.3.11 in relation to requests to change *normal voltage*.

(e) For *connection* to a *transmission network*, there may be more than one *Connection Applicant* in relation to a *connection* where there are different persons developing and owning *contestable IUSA components*, *dedicated connection assets*, *designated network assets* and *Transmission Network User facilities* in relation to that *connection*.

5.3.1A Application of rule to connection of embedded generating units

(a) [**Deleted**]

(b) If a *Connection Applicant* wishes to *connect* an *embedded generating unit*, then:

(1) unless otherwise provided, rule 5.3A applies to the proposed connection and clauses 5.3.2, 5.3.3, 5.3.4 and 5.3.5 do not apply to the proposed *connection*; and

(2) for the avoidance of doubt, the application of the balance of Chapter 5, Part B to the *Connection Applicant* is otherwise unaffected by this clause 5.3.1A.

(c) A reference to a *Connection Applicant* in paragraph (b) is to a:

(1) person who intends to be an *Embedded Generator*;

(2) person who is required to apply to *AEMO* for an exemption from the requirement to register as a *Generator* in respect of an *embedded generating unit*; ~~or~~

(3) *non-registered embedded generator* who has made an election under clause 5A.A.2(c)~~.~~; or

(4) a person (including a *non-registered embedded generator*) who is seeking *connection* for a *large inverter based resource*,

and who makes a *connection* enquiry under clause 5.3A.5 or an *application to connect* under clause 5.3A.9 in relation to any *generating systems*, or any *network elements* used in the provision of a *network service*, as the case may be.

5.3.3 Response to connection enquiry

(a) In preparing a response to a *connection* enquiry, the *Network Service Provider* must liaise with other *Network Service Providers* with whom it has *connection agreements*, if the *Network Service Provider* believes, in its reasonable opinion, that compliance with the terms and conditions of those *connection agreements* will be affected. The *Network Service Provider* responding to the *connection* enquiry may include in that response the reasonable requirements of any such other *Network Service Providers* for information to be provided by the *Connection Applicant*.

(b) The *Network Service Provider* must:

(1) within:

(i) 40 *business days* after receipt of the *connection* enquiry which relates to a *designated network asset* and all such additional information (if any) advised under clause 5.3.2(b);

(ii) 30 *business days* after receipt of any other *connection* enquiry and all such additional information (if any) advised under clause 5.3.2(b); or

(2) within 30 *business days* after receipt of a request from the *Connection Applicant* to the *Local Network Service Provider* to process the *connection* enquiry under clause 5.3.2(d),

provide the following information in writing to the *Connection Applicant*:

(3) the identity of other parties that the *Network Service Provider* considers:

(i) will need to be involved in planning to make the *connection*; and

(ii) must be paid for *transmission services* or *distribution services* in the appropriate jurisdiction;

(4) whether it will be necessary for any of the parties identified in subparagraph (3) to enter into an agreement with the *Connection Applicant* in respect of the provision of *connection* or other *transmission services* or *distribution services* or both, to the *Connection Applicant*;

(5) in relation to *Distribution Network Service Providers* and *Network Service Providers* for *declared transmission systems*, whether any service the *Network Service Provider* proposes to provide is *contestable* in the relevant *participating jurisdiction*;

(5A) whether any service a *Transmission Network Service Provider* proposes to provide in relation to the *connection* enquiry is a *prescribed transmission service*, a *negotiated transmission service* or a *non-regulated transmission service* including, if applicable:

(i) whether the capital cost of any *identified user shared asset* is reasonably expected to exceed $10 million; and

(ii) if so, the *contestable IUSA components* and *non-contestable IUSA components*;

(5B) whether the *connection* enquiry relates to *connection* to a part of a *network* that is a *designated network asset*;

(6) a *preliminary program* showing proposed milestones for *connection* and access activities which may be modified from time to time by agreement of the parties, where such agreement must not be unreasonably withheld;

(7) the specification of the interface required to provide the *connection*, including plant and equipment requirements for the *connection* of a *dedicated connection asset* or *designated network asset* (as applicable),

to the *transmission network* and of the interface between the *transmission network* and any *contestable IUSA components* or *designated network asset;*;

(8) if applicable, the scope of work for any *non-contestable IUSA components*;

(9) if the response to the *connection enquiry* specifies the need for an *identified user shared asset* the capital cost of which is reasonably expected to exceed $10 million or includes a *designated network asset*, a functional specification:

(i) setting out the technical parameters for that asset as described in the table in clause 5.2A.4 with sufficient detail to enable the *Connection Applicant* to obtain binding tenders for the provision of detailed design, construction and ownership services for the *contestable IUSA components* or *designated network asset*; and;

(ii) at the *Primary Transmission Network Service Provider's* option in respect of an *identified user shared asset*, that is above those minimum requirements in subparagraph (i) subject to the *Primary Transmission Network Service Provider* separately identifying the additional requirements and agreeing to fund the additional works related to those requirements;

(10) an indicative costing for operation and maintenance services for any *identified user shared asset* or *designated network asset*, based on the functional specification provided pursuant to subparagraph (9); and

(11) the amount of any enquiry fee under clause 5.3.2(g).

Note

This paragraph is classified as a tier 3 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) The *Network Service Provider* must:

(1) within 30 *business days* after receipt of the *connection* enquiry and all such additional information (if any) advised under clause 5.3.2(b); or

(2) within 30 *business days* after receipt of a request from the *Connection Applicant* to the *Local Network Service Provider* to process the *connection* enquiry under clause 5.3.2(d),

provide the *Connection Applicant* with the following written details of each technical requirement relevant to the proposed *plant*:

(3) the *automatic access standards*;

(4) the *minimum access standards*;

(5) the applicable *plant standards*;

(6) the *negotiated access standards* that will require *AEMO's* involvement in accordance with clause 5.3.4A(c); and

(7) the *normal voltage* level, if that is to change from the *nominal voltage* level.

Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(b2) A *Registered Participant*, *AEMO* or *interested party* may request the *Reliability Panel* to determine whether, in respect of one or more technical requirements for access, an existing Australian or international standard, or a part thereof, may be adopted as a *plant standard* for a particular class of *plant*.

(b3) Where, in respect of a technical requirement for access, the *Reliability Panel* determines a *plant standard* for a particular class of *plant* in accordance with clause 8.8.1(a)(8) as an acceptable alternative to a particular *minimum access standard* or *automatic access standard*, a *plant* which meets that *plant standard* is deemed to meet the applicable *automatic access standard* or *minimum access standard* for that technical requirement.

(b4) In making a determination in accordance with clause 5.3.3(b2) the *Reliability Panel* must consult *Registered Participants* and *AEMO* using the *Rules consultation procedures*.

(b5) For a *connection point* for a proposed new *connection* in relation to which clause 5.3.4B applies~~of a *generating system* or *market network service facility*~~, within the time applicable under paragraph (b1), the *Network Service Provider* must provide the *Connection Applicant* with the following written details:

(1) the minimum *three phase fault level* at the *connection point*; ~~and~~

(2) the results of the *Network Service Provider's* preliminary assessment of the impact of the new *connection* undertaken in accordance with the *system strength impact assessment guidelines* and clause 5.3.4B; and~~.~~

(3) except where, under clause 5.3.4B(a3), the *Network Service Provider* is not required to calculate the *system strength locational factor*:

(i) the indicative *system strength quantity* for the *connection point*;

(ii) the *system strength locational factor* for the *connection point*; and

(iii) the relevant *system strength node* and the indicative *system strength charge* using the then applicable *system strength unit price*.

Note

This paragraph is classified as a tier 3 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) Within 30 *business days* after receipt of the *connection* enquiry and all such additional information (if any) advised under clause 5.3.2(b) or, if the *Connection Applicant* has requested the *Local Network Service Provider* to process the *connection* enquiry under clause 5.3.2(d), within 20 *business days* after receipt of that request, the *Network Service Provider* must provide to the *Connection Applicant* written advice of all further information which the *Connection Applicant* must prepare and obtain in conjunction with the

Network Service Provider to enable the *Network Service Provider* to assess an *application to connect* including:

(1) details of the *Connection Applicant's connection* requirements, and the *Connection Applicant's* specifications of the *facility* to be connected, consistent with the requirements advised in accordance with clause 5.3.3(b1);

(2) details of the *Connection Applicant's* reasonable expectations of the level and standard of service of *power transfer capability* that the *network* should provide;

(3) a list of the technical data to be included with the *application to connect*, which may vary depending on the *connection* requirements and the type, rating and location of the *facility* to be *connected* and will generally be in the nature of the information set out in schedule 5.5 but may be varied by the *Network Service Provider* as appropriate to suit the size and complexity of the proposed *facility* to be *connected*;

(4) commercial information to be supplied by the *Connection Applicant* to allow the *Network Service Provider* to make an assessment of the ability of the *Connection Applicant* to satisfy the prudential requirements set out in rules 6.21 and 6A.28;

(4a) the *DER generation information* that the *Network Service Provider* requires;

(5) the amount of the application fee which is payable on lodgement of an *application to connect*, such amount:

(i) not being more than necessary to cover the reasonable costs of all work anticipated to arise from investigating the *application to connect* and preparing the associated offer to *connect* and to meet the reasonable costs anticipated to be incurred by *AEMO* and other *Network Service Providers* whose participation in the assessment of the *application to connect* will be required; and

(ii) must not include any amount for, or in anticipation of, the costs of the person using an *Independent Engineer*; and

(6) any other information relevant to the submission of an *application to connect*.

Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

5.3.4 Application for connection

(a) A person who has made a *connection* enquiry under clause 5.3.2 may, following receipt of the responses under clause 5.3.3, make an *application to connect* in accordance with this clause 5.3.4, clause 5.3.4A and clause 5.3.4B.

(b) To be eligible for *connection* the *Connection Applicant* must submit an *application to connect* containing:

(1) the information specified in clause 5.3.3(c);

(2) the relevant application fee to the relevant *Network Service Provider*;

(3) for services related to *contestable IUSA components* that the *Connection Applicant* has not obtained from the *Primary Transmission Network Service Provider* or a *designated network asset* (as applicable):

(i) the *Connection Applicant*'s process for how the *Primary Transmission Network Service Provider* will undertake a review of the detailed design and inspect the construction of those components or assets and how risks of defects will be addressed;

(ii) the detailed design of those components or assets; and

(iii) if the *Primary Transmission Network Service Provider* will not own the *contestable IUSA components* or *designated network asset*, the *Connection Applicant*'s proposed changes (if any) to the form of *network operating agreement* published pursuant to schedule 5.10; ~~and~~

(4) if the *Connection Applicant* has obtained services related to *contestable IUSA components* or a *designated network asset* other than from the *Primary Transmission Network Service Provider*, all information reasonably required for the *Primary Transmission Network Service Provider* to properly provide operation and maintenance services for the life of those components or assets, including details of the *contestable IUSA components* or *designated network assets*' construction, instructions for operation and maintenance and health safety and asset management manuals~~.~~; and

(5) except where, under clause 5.3.4B(a3), the *Network Service Provider* is not required to calculate the *system strength locational factor*, the *Connection Applicant's* election under clause 5.3.4B(b1).

(b1) The *Connection Applicant's* detailed design under paragraph (b)(3)(ii):

(1) must be consistent with the minimum functional specification provided by the *Primary Transmission Network Service Provider* under clause 5.3.3(b)(9)(i);

(2) must not unreasonably inhibit the capacity for future expansion of the *identified user shared asset* or preclude the possibility of future *connections* to that asset; and

(3) subject to the *Connection Applicant* considering the *Primary Transmission Network Service Provider's* additional requirements under clause 5.3.3(b)(9)(ii) in good faith, may be (but is not required to be) consistent with those additional requirements.

(c) In relation to *Distribution Network Service Providers* and *Network Service Providers* for *declared transmission systems*, the *Connection Applicant* may submit *applications to connect* to more than one *Network Service Provider* in order to receive additional offers to *connect* in respect of *facilities* to be provided that are *contestable*.

(d) To the extent that an application fee includes amounts to meet the reasonable costs anticipated to be incurred by any other *Network Service Providers* or *AEMO* in the assessment of the *application to connect*, a *Network Service*

Provider who receives the *application to connect* and associated fee must pay such amounts to the other *Network Service Providers* or *AEMO*, as appropriate.

(e) For each technical requirement where the proposed arrangement will not meet the *automatic access standards* nominated by the *Network Service Provider* pursuant to clause 5.3.3(b1), the *Connection Applicant* must submit with the *application to connect* a proposal for a *negotiated access standard* for each such requirement to be determined in accordance with clause 5.3.4A.

(f) The *Connection Applicant* may:

(1) lodge separate *applications to connect* and separately liaise with the other *Network Service Providers* identified in clause 5.3.3(b) who may require a form of agreement;

(2) lodge one *application to connect* with the *Network Service Provider* who processed the *connection* enquiry and require it to liaise with those other *Network Service Providers* and obtain and present all necessary draft agreements to the *Connection Applicant*; or

(3) lodge a combined *application to connect* with the *Primary Network Service Provider* where the *connection* involves more than one *Connection Applicant* due to different persons developing and owning *contestable IUSA components*, *dedicated connection assets*, *designated network assets* and *Transmission Network User facilities* in relation to that *connection*.

(g) A *Connection Applicant* who proposes a *system strength remediation scheme* under clause 5.3.4B must submit its proposal with the *application to connect*.

5.3.4A Negotiated access standards

(a) *AEMO* must advise on *AEMO advisory matters*.

(b) A *negotiated access standard* must:

(1) subject to subparagraph (1A), be no less onerous than the corresponding *minimum access standard* provided by the *Network Service Provider* under clauses 5.3.3(b1)(4) or S5.4B(b)(2);

(1A) with respect to a submission by a *Generator* under clause 5.3.9(b)(3), or a *Network User* or *Market Network Service Provider* under clause 5.3.12(b)(3), be no less onerous than the *performance standard* that corresponds to the technical requirement that is affected by the alteration to the *generating system* or *plant* (as applicable);

(2) be set at a level that will not adversely affect *power system security*;

(3) be set at a level that will not adversely affect the quality of *supply* for other *Network Users*; and

(4) in respect of *generating plant*, meet the requirements applicable to a *negotiated access standard* in Schedule 5.2.

(b1) When submitting a proposal for a *negotiated access standard* under clauses 5.3.4(e), 5.3A.9(f), 5.3.9(b)(3), 5.3.12(b)(3) or subparagraph (h)(3), and where there is a corresponding *automatic access standard* for the relevant

technical requirement, a *Connection Applicant* must propose a standard that is as close as practicable to the corresponding *automatic access standard*, having regard to:

(1) the need to protect the *plant* from damage;

(2) *power system* conditions at the location of the proposed *connection*; and

(3) the commercial and technical feasibility of complying with the *automatic access standard* with respect to the relevant technical requirement.

(b2) When proposing a *negotiated access standard* under paragraph (b1), the *Connection Applicant* must provide reasons and evidence to the *Network Service Provider* and *AEMO* as to why, in the reasonable opinion of the *Connection Applicant*, the proposed *negotiated access standard* is appropriate, including:

(1) how the *Connection Applicant* has taken into account the matters outlined in subparagraphs (b1)(1) to (3); and

(2) how the proposed *negotiated access standard* meets the requirements of paragraph (b).

(c) Following the receipt of a proposed *negotiated access standard* under clauses 5.3.4(e), 5.3A.9(f), 5.3.9(b)(3), 5.3.12(b)(3) or subparagraph (h)(3), the *Network Service Provider* must consult with *AEMO* as soon as practicable in relation to *AEMO advisory matters* for that proposed standard.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(d) Within 20 *business days* following the later of:

(1) receipt of a proposed *negotiated access standard* under clauses 5.3.4(e), 5.3A.9(f), 5.3.9(b)(3), 5.3.12(b)(3) or subparagraph (h)(3); and

(2) receipt of all information required to be provided by the *Connection Applicant* under clauses S5.2.4, S5.5.6, S5.3.1(a1) or S5.3a.1(a1),

AEMO must advise the *Network Service Provider* in writing, in respect of *AEMO advisory matters*, whether the proposed *negotiated access standard* should be accepted or rejected.

(d1) When advising the *Network Service Provider* under paragraph (d) to reject a proposed *negotiated access standard*, and subject to obligations in respect of *confidential information*, *AEMO* must:

(1) provide detailed reasons in writing for the rejection to the *Network Service Provider*, including:

(i) where the basis of *AEMO*'s advice is lack of evidence from the *Connection Applicant*, details of the additional evidence of the type referred to in paragraph (b2) *AEMO* requires to continue assessing the proposed *negotiated access standard*; and

(ii) the extent to which each of the matters identified at subparagraphs (b)(1), (b)(1A), (b)(2) and (b)(4) contributed to *AEMO*'s decision to reject the proposed *negotiated access standard*; and

(2) recommend a *negotiated access standard* that *AEMO* considers meets the requirements of subparagraphs (b)(1), (b)(1A), (b)(2) and (b)(4).

(e) Within 30 *business days* following the later of:

(1) receipt of a proposed *negotiated access standard* in accordance with clauses 5.3.4(e), 5.3A.9(f), 5.3.9(b)(3), 5.3.12(b)(3) or subparagraph (h)(3); and

(2) receipt of all information required to be provided by the *Connection Applicant* under clauses S5.2.4, S5.5.6, S5.3.1(a1) or S5.3a.1(a1),

the *Network Service Provider* must accept or reject a proposed *negotiated access standard*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(f) The *Network Service Provider* must reject the proposed *negotiated access standard* where:

(1) in the *Network Service Provider*'s reasonable opinion, one or more of the requirements at subparagraphs (b)(1), (b)(1A), (b)(3) and (b)(4) are not met; or

(2) *AEMO* has advised the *Network Service Provider* under paragraph (d) to reject the proposed *negotiated access standard*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(g) If a *Network Service Provider* rejects a proposed *negotiated access standard*, the *Network Service Provider* must, at the same time:

(1) subject to obligations in respect of *confidential information*, provide to the *Connection Applicant*:

(i) where the basis for the *Network Service Provider's* rejection is lack of evidence from the *Connection Applicant*, details of the additional evidence of the type referred to in paragraph (b2) the *Network Service Provider* requires to continue assessing the proposed *negotiated access standard*;

(ii) detailed reasons in writing for the rejection, including the extent to which each of the matters identified at subparagraphs (b)(1), (b)(1A), (b)(3) and (b)(4) contributed to the *Network Service Provider's* decision to reject the proposed *negotiated access standard*; and

(iii) the detailed reasons and recommendation (if any) provided by *AEMO* to the *Network Service Provider* in respect of an *AEMO advisory matter* under subparagraphs (d1)(1) and (2); and

(2) advise the *Connection Applicant* of a *negotiated access standard* that the *Network Service Provider* considers meets the requirements of subparagraphs (b)(1), (b)(1A), (b)(3) and (b)(4).

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(h) The *Connection Applicant* may in relation to a proposed *negotiated access standard* advised by a *Network Service Provider* in accordance with subparagraph (g)(2):

(1) accept the proposed *negotiated access standard*;

(2) reject the proposed *negotiated access standard*;

(3) propose an alternative *negotiated access standard* to be further evaluated in accordance with the criteria in paragraph (b); or

(4) elect to adopt the relevant *automatic access standard* or a corresponding *plant standard*.

(i) An *automatic access standard* or if the procedures in this clause 5.3.4A have been followed a *negotiated access standard*, that forms part of the terms and conditions of a *connection agreement*, is taken to be the *performance standard* applicable to the *connected plant* for the relevant technical requirement.

5.3.4B System strength mitigation requirement~~System strength remediation for new connections~~

~~(a) A *Network Service Provider* must, in accordance with the *system strength impact assessment guidelines*, undertake a *system strength impact assessment* for each proposed new *connection* of a *generating system* or *market network service facility* and any proposed alteration to a *generating system* to which clause 5.3.9 applies. A *Network Service Provider* must make:~~

~~(1) a preliminary assessment if it is in receipt of a *connection* enquiry or a request by a *Generator* under clause 5.3.9(c1); and~~

~~(2) a full assessment if it is in receipt of an *application to connect* or submission from a *Generator* under clause 5.3.9, unless the preliminary assessment indicates that the full assessment is not needed.~~

~~**Note**~~

~~This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)~~

(a) This clause applies in relation to:

(1) a proposed new *connection* of a *generating system* or *market network service facility* to which rule 5.3 or 5.3A applies;

(2) a proposed new *connection* for a *Network User* to whom schedule 5.3 applies where the *facility* to be *connected* includes an *inverter based resource*; and

(3) a proposed alteration to a *generating system* where clause 5.3.9 applies or to other *connected plant* where clause 5.3.12 applies.

(a1) In this clause, a reference to a *Connection Applicant* includes a reference to a *Generator* to whom clause 5.3.9 applies and a *Network User* or *Market Network Service Provider* to whom clause 5.3.12 applies.

(a2) For each proposed new *connection* or proposed alteration to a *generating system* or other *connected plant* to which this clause applies, a *Network Service Provider* must:

(1) undertake a preliminary *system strength impact assessment* in accordance with the *system strength impact assessment guidelines*;

(2) subject to paragraph (a3), calculate the *system strength locational factor* for the new *connection* or proposed alteration in accordance with the *system strength impact assessment guidelines*;

(3) undertake a full *system strength impact assessment* following the preliminary assessment, unless:

(i) the preliminary assessment indicates there will be no *general system strength impact* or the impact is below any threshold specified in the *system strength impact assessment guidelines* for the purposes of paragraph (f)(3); or

(ii) where applicable, the *Connection Applicant* has elected in accordance with paragraph (b1) to pay the *system strength charge* in relation to the *connection*; and

(4) where the *Connection Applicant* has elected in accordance with paragraph (b1) to pay the *system strength charge* in relation to the *connection* or proposed alteration, undertake modelling in accordance with the *system strength impact assessment guidelines* to verify the stability of the *plant*.

(a3) A *Network Service Provider* is not required to calculate the *system strength locational factor* where it determines in accordance with the *system strength impact assessment guidelines* that a *system strength locational factor* cannot reasonably be calculated or would be manifestly excessive.

(a4) A *Connection Applicant* in receipt of the *Network Service Provider's* calculation of the *system strength locational factor* may request the *Network Service Provider* to undertake a further preliminary *system strength impact assessment* in accordance with the *system strength impact assessment guidelines* and provide a revised *system strength locational factor* for a new *connection* or proposed alteration to a *generating system* or other *connected plant*. The *Network Service Provider* may require payment of a fee to meet the reasonable costs anticipated to be incurred by the *Network Service Provider* in undertaking any further preliminary assessment.

(b) The *Network Service Provider* must give the results of the preliminary assessment and where applicable the full assessment to the *Connection Applicant* ~~or *Generator*~~ concerned following consultation with *AEMO*.

(b1) A *Connection Applicant* must elect in its *application to connect*, its submission under clause 5.3.9(b) or its submission under clause 5.3.12(b) (as applicable) whether the *system strength charge* will be payable in relation to the new *connection* or alteration to the *generating system* or other *connected plant* (as applicable). The election cannot be revoked.

(c) A dispute referred to in paragraph (d) between any of:

(1) *AEMO*;

(2) a~~A~~ *Network Service Provider* required to conduct an assessment under paragraph (a);

(3) a *Connection Applicant* who has submitted an *application to connect* for which a full assessment is required under paragraph (a2)(3)~~paragraph (a)~~;

(4) a *Generator* who proposes an alteration to a *generating system* to which clause 5.3.9 applies and for which a full assessment is required under paragraph (a2)(3); and~~paragraph (a),~~

(5) a *Network User* or *Market Network Service Provider* who proposes an alteration to *connected plant* to which clause 5.3.12 applies and for which a full assessment is required under paragraph (a2)(3),

may be determined under rule 8.2.

(d) Paragraph (c) applies to any dispute relating to the assessment of the *general system strength impact* ~~an *adverse system strength impact*~~ as a result of conducting a *system strength impact assessment* including a dispute in relation to:

(1) whether the model specified by *AEMO* for the purposes of clause 4.6.6(b)(2) was reasonably appropriate for conducting the *system strength impact assessment*; and

(2) the application of the *system strength impact assessment guidelines* when undertaking a *system strength impact assessment*.

(e) Subject to paragraph (f), a *Network Service Provider* must undertake *system strength connection works* at the cost of the *Connection Applicant* ~~or *Generator* (as applicable)~~ if the full assessment undertaken in accordance with the *system strength impact assessment guidelines* indicates that the *Connection Applicant's* proposed new *connection* or proposed alteration will have a *general system strength impact*~~of a *generating facility* or *market network service facility* or the *Generator's* proposed alteration to a *generating system* to which clause 5.3.9 applies will have an *adverse system strength impact*~~.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(f) Paragraph (e) does not require a *Network Service Provider* to undertake, nor permit a *Network Service Provider* to require, *system strength connection works* in the following circumstances:

(1) the proposed new *connection* or alteration does not proceed;

(2) to the extent that the *general system strength impact* ~~*adverse system strength impact*~~ referred to in paragraph (e) is or will be avoided or remedied by a *system strength remediation scheme* agreed or determined under this clause and implemented by the *Connection Applicant* ~~*Registered Participant*~~ in accordance with its *connection agreement*; ~~or~~

(3) to the extent that the impact is below any threshold specified in the *system strength impact assessment guidelines* for this purpose~~.~~; or

(4) the *Connection Applicant* has elected for the *system strength charge* to be payable in relation to the new *connection* or proposed alteration.

(g) A *Connection Applicant* must include any proposal for a *system strength remediation scheme* in its *application to connect* or its proposal under clause 5.3.9(b)(4) or under clause 5.3.12(b)(4).

(h) A *Connection Applicant* proposing to install *plant* as part of a *system strength remediation scheme* must include a description of the *plant*~~, the ratings of the proposed *plant* (in MVA)~~ and other information (including models) reasonably required by the *Network Service Provider* and *AEMO* to assess the *system strength remediation scheme*.

(i) A *Network Service Provider* must, following the receipt of a proposal for a *system strength remediation scheme*, consult with *AEMO* as soon as practical in relation to the proposal.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(j) Following the submission of a proposal for a *system strength remediation scheme*, *AEMO* must use reasonable endeavours to respond to the *Network Service Provider* in writing in respect of the proposal within 20 *business days*.

(k) A *Network Service Provider* must within 10 *business days* following the receipt of a response from *AEMO* under paragraph (h) to a proposal for a *system strength remediation scheme*, accept or reject the proposal.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(l) The *Network Service Provider* must reject a proposal for a *system strength remediation scheme* if the scheme is not reasonably likely to achieve its required outcome or would:

(1) in the reasonable opinion of the *Network Service Provider* adversely affect quality of *supply* for other *Network Users*; or

(2) on *AEMO's* reasonable advice, adversely affect *power system security*.

(m) If a *Network Service Provider* rejects a proposal for a *system strength remediation scheme*, the *Network Service Provider* must give its reasons but has no obligation to propose a *system strength remediation scheme* that it will accept.

(n) The *Connection Applicant* submitting a proposal for a *system strength remediation scheme* rejected by a *Network Service Provider* may:

(1) propose an alternative *system strength remediation scheme* to be further evaluated following the process initiated under paragraph (i); or

(2) request negotiations under paragraph (o).

(o) If a *Connection Applicant* requests negotiations under this paragraph, the *Connection Applicant*, the *Network Service Provider* and *AEMO* must negotiate in good faith to reach agreement in respect of the proposal for a *system strength remediation scheme*.

(p) If the matter is not resolved by negotiation under paragraph (o):

(1) in the case of a *connection* to a *transmission system* other than the *declared transmission system* of an *adoptive jurisdiction*, the matter may be dealt with as a dispute under rule 5.5 (but not rule 8.2); or

(2) otherwise, may be dealt with under rule 8.2 or as a *distribution service access dispute* as applicable.

(q) The parties to a *connection agreement* containing a *system strength remediation scheme* must not modify the scheme unless the modified scheme has been agreed or determined under this clause. A *Registered Participant* proposing to modify a *system strength remediation scheme* must submit its proposal for modification to the *Network Service Provider* for evaluation by the *Network Service Provider* and *AEMO* under this clause. Once agreed or determined, the modified scheme must be incorporated as an amendment to the *connection agreement* and notified to *AEMO* under clause 5.3.7(g).

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

5.3.4C Information about system strength connection points

(a) A *Network Service Provider* for a *system strength connection point* who is not also the *System Strength Service Provider* for the *system strength connection point* must notify the information in paragraph (b) to the relevant *System Strength Service Provider* within 10 *business days* of either of the following occurring:

(1) an election being made under clause 5.3.4B(b1) for the *system strength charge* to be payable in relation to a new *connection* or proposed alteration; or

(2) agreement being reached under clause 5.3.9 or clause 5.3.12 to vary the performance of *plant* at a *system strength connection point*, relative to the technical requirements in clause S5.2.5.15, clause S5.3.11 or clause S5.3a.7 (as applicable).

(b) The *Network Service Provider* must notify the:

(1) *system strength locational factor*;

(2) *short circuit ratio* and *rated active power*, rated *power transfer capability* or *maximum demand* for the *system strength connection point* agreed in accordance with clause S5.2.5.15, clause S5.3.11 or clause S5.3a.7 (as applicable);

(3) the expected date from which the *system strength charge* for the *connection* will commence or the amendment take effect; and

(4) information reasonably required by the *System Strength Service Provider* to identify the relevant *connection*.

(c) A *Network Service Provider* for a *system strength connection point* must, within 20 *business days* of a request of the relevant *System Strength Service Provider*:

(1) calculate in accordance with the *system strength impact assessment guidelines* and notify to the *System Strength Service Provider*, the *system strength locational factor* applicable to the *system strength connection point* for each year of the *system strength charging period* specified by the *System Strength Service Provider*; and

(2) provide any other information reasonably required by the *System Strength Service Provider* for the purposes of calculating and billing *system strength charges* for the *system strength connection point*.

(d) A *System Strength Service Provider* must establish and maintain arrangements to enable other *Network Service Providers* to provide information to the *System Strength Service Provider* in accordance with this clause 5.3.4C.

(e) A *System Strength Service Provider* must establish and maintain a record of all *connections* subject to the *system strength charge* and for which it is the *System Strength Service Provider* and must include in the record all information reasonably required by the *System Strength Service Provider* to identify the relevant *connection* for the purposes of calculating and billing *system strength charges*.

5.3.9 Procedure to be followed by a Generator proposing to alter a generating system

[Note: In paragraph (a), 'Subject to paragraph (a1), this' will change to 'This" on 4 June 2023 under Schedule 2 of the *National Electricity Amendment (Mandatory primary frequency response) Rule 2020 No. 5*.]

(a) Subject to paragraph (a1), this clause 5.3.9 applies where a *Generator* proposes to alter a *connected generating system* or a *generating system* for which *performance standards* have been previously accepted by the *Network Service Provider* and *AEMO* (in relation to *AEMO advisory matters*) and that alteration:

(1) will affect the performance of the *generating system* relative to any of the technical requirements set out in clauses S5.2.5, S5.2.6, S5.2.7 and S5.2.8; or

(2) will, in *AEMO's* reasonable opinion, have a *general system strength impact*~~an adverse system strength impact~~; or

(3) will, in *AEMO*'s reasonable opinion, adversely affect *network capability*, *power system security*, quality or reliability of *supply*, *inter-regional power transfer capability* or the use of a *network* by another *Network User*.

[Note: Paragraph (a1) will be deleted on 4 June 2023 by Schedule 2 of the *National Electricity Amendment (Mandatory primary frequency response) Rule 2020 No. 5*.]

(a1) This clause 5.3.9 does not apply in relation to any modifications made to a *generating system* by a *Scheduled Generator* or *Semi-Scheduled Generator* in order to comply with the *Primary Frequency Response Requirements* as applicable to that *generating system*.

(b) A *Generator* to which this clause applies, must submit to the *Network Service Provider* with a copy to *AEMO*:

(1) a description of the nature of the alteration and the timetable for implementation;

(2) in respect of the proposed alteration to the *generating system*, details of the *generating unit* design data and *generating unit* setting data in accordance with the *Power System Model Guidelines*, *Power System Design Data Sheet* and *Power System Setting Data Sheet*;

Note

This subparagraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(3) in relation to each relevant technical requirement for which the proposed alteration to the equipment will affect the performance of the *generating system*, the proposed amendments to the *plant's* existing corresponding *performance standard* for that technical requirement; and

(4) where relevant, the *Generator's* proposed *system strength remediation scheme* or its election for the *system strength charge* to be payable in relation to the alteration.

(c) Clause 5.3.4A applies to a submission by a *Generator* under subparagraph (b)(3).

(c1) Clause 5.3.4B applies to a submission by a *Generator* under subparagraph (b)(4). A *Generator* may request the *Network Service Provider* to undertake a preliminary assessment in accordance with the *system strength impact assessment guidelines* before making a submission under paragraph (b).

(d) Without limiting paragraph (a), a proposed alteration to the equipment specified in column 1 of the table set out below is deemed to affect the performance of the *generating system* relative to technical requirements specified in column 2, thereby necessitating a submission under subparagraph (b)(3), unless *AEMO* and the *Network Service Provider* otherwise agree.

Column 1 (altered equipment)	Column 2 (clause)
machine windings	S5.2.5.1, S5.2.5.2, S5.2.8
power converter	S5.2.5.1, S5.2.5.2, S5.2.5.5, S5.2.5.12, S5.2.5.13, S5.2.8, S5.2.5.15
reactive compensation plant	S5.2.5.1, S5.2.5.2, S5.2.5.5, S5.2.5.12, S5.2.5.13
excitation control system	S5.2.5.5, S5.2.5.7, S5.2.5.12, S5.2.5.13
voltage control system	S5.2.5.5, S5.2.5.7, S5.2.5.12, S5.2.5.13
governor *control system*	S5.2.5.7, S5.2.5.11, S5.2.5.14
power *control system*	S5.2.5.11, S5.2.5.14
protection system	S5.2.5.3, S5.2.5.4, S5.2.5.5, S5.2.5.7, S5.2.5.8, S5.2.5.9, S5.2.5.10, S5.2.5.16
auxiliary supplies	S5.2.5.1, S5.2.5.2, S5.2.7
remote control and monitoring system	S5.2.5.14, S5.2.6.1, S5.2.6.2

(e) The *Network Service Provider* may as a condition of considering a submission made under paragraph (b), require payment of a fee to meet the reasonable costs anticipated to be incurred by the *Network Service Provider*, other *Network Service Providers* and *AEMO*, in the assessment of the submission.

(f) The *Network Service Provider* must require payment of a fee under paragraph (e) if so requested by *AEMO*.

(g) On payment of the required fee referred to in paragraph (e), the *Network Service Provider* must pay such amounts as are on account of the costs anticipated to be incurred by the other *Network Service Providers* and *AEMO*, as appropriate.

(h) If the application of this clause 5.3.9 leads to a variation to an existing *connection agreement* the *Network Service Provider* and the *Generator* must immediately jointly advise *AEMO*, including the details of any *performance standards* amended pursuant to this clause 5.3.9.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

5.3.10 Acceptance of performance standards for generating plant that is altered

(a) A *Generator* must not commission altered *generating plant* until the *Network Service Provider* has advised the *Generator* that the provider and *AEMO* are satisfied in accordance with paragraph (b).

Note

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

(b) In relation to altered *generating plant*, the *Network Service Provider* and *AEMO*, to the extent of *AEMO's* advisory role under clause 5.3.4A and clause 5.3.4B, must be satisfied that:

(1) the *Generator* has complied with clause 5.3.9; and

(2) each amended *performance standard* submitted by the *Generator* either meets:

(i) the *automatic access standard* applicable to the relevant technical requirement; or

(ii) the *negotiated access standard* under clause 5.3.4A as applied in accordance with clause 5.3.9(c); and

(3) any *system strength remediation scheme* satisfies clause 5.3.4B.

(c) For the purposes of paragraph (a), *AEMO* must advise the *Network Service Provider* as to whether it is satisfied with the matters referred to paragraph (b).

5.3.11 Notification of request to change normal voltage

(a) On receipt of a request from a *Network Service Provider* to change *normal voltage, AEMO* must *publish* a notice to *Registered Participants* advising:

(1) the change in *normal voltage* requested; and

(2) the *connection point* to which the request relates.

(b) Within a reasonable period after publication of the notice in paragraph (a), *AEMO* must *publish* a further notice to *Registered Participants* advising:

(1) whether the *normal voltage* at the relevant *connection point* will change; and

(2) the nature of, and reasons for, any such change.

5.3.12 Procedure to be followed for alterations to other connected plant

(a) This clause 5.3.12 applies where a *Network User* specified in clause S5.3.11(a) or a *Market Network Service Provider* specified in clause S5.3a.1a proposes to alter *connected plant* and that alteration will affect the

performance of the *plant* relative to the technical requirements in clause S5.3.11 or clause S5.3a.7 (as applicable).

(b) A *Network User* or *Market Network Service Provider* to whom this clause applies, must submit to the *Network Service Provider* with a copy to *AEMO*:

(1) a description of the nature of the alteration and the timetable for implementation;

(2) in respect of the proposed alteration to the *plant*, details of the design setting data in accordance with the *Power System Model Guidelines*, *Power System Design Data Sheet* and *Power System Setting Data Sheet*;

(3) in relation to the technical requirements in clause S5.3.11 or clause S5.3a.7 (as applicable), the proposed amendments to the *plant's* existing corresponding *performance standard* for that technical requirement; and

(4) the *Network User*'s or *Market Network Service Provider's* proposed *system strength remediation scheme* or its election for the *system strength charge* to be payable in relation to the alteration.

(c) Clause 5.3.4A applies to a submission under subparagraph (b)(3).

(d) Clause 5.3.4B applies to a submission under subparagraph (b)(4). A *Network User* or *Market Network Service Provider* (as applicable) may request the *Network Service Provider* to undertake a preliminary assessment in accordance with the *system strength impact assessment guidelines* before making a submission under paragraph (b).

(e) The *Network Service Provider* may as a condition of considering a submission made under paragraph (b), require payment of a fee to meet the reasonable costs anticipated to be incurred by the *Network Service Provider*, other *Network Service Providers* and *AEMO*, in the assessment of the submission.

(f) The *Network Service Provider* must require payment of a fee under paragraph (e) if so requested by *AEMO*.

(g) On payment of the required fee referred to in paragraph (d), the *Network Service Provider* must pay such amounts as are on account of the costs anticipated to be incurred by the other *Network Service Providers* and *AEMO*, as appropriate.

(h) If the application of this clause 5.3.12 leads to a variation to the agreed technical requirements in clause S5.3.11 or clause S5.3a.7 (as applicable) in an existing *connection agreement*, the *Network Service Provider* and the *Network User* or *Market Network Service Provider* (as applicable) must immediately jointly advise *AEMO*, including the details of any *performance standards* amended pursuant to this clause 5.3.12.

5.3.13 Acceptance of performance standards for other plant that is altered

(a) A *Network User* or *Market Network Service Provider* to whom clause 5.3.12 applies must not commission altered *plant* until the *Network Service Provider* has advised the *Network User* or *Market Network Service Provider* (as

applicable) that the provider and *AEMO* are satisfied in accordance with paragraph (b).

(b) In relation to altered *plant*, the *Network Service Provider* and *AEMO*, to the extent of *AEMO's* advisory role under clause 5.3.4A and clause 5.3.4B, must be satisfied that:

(1) the *Network User* or *Market Network Service Provider* (as applicable) has complied with clause 5.3.12; and

(2) each amended *performance standard* submitted by the *Network User* or *Market Network Service Provider* (as applicable) meets the requirements of clause S5.3.11 or clause S5.3a.7 (as applicable); and

(3) any *system strength remediation scheme* satisfies clause 5.3.4B.

(c) For the purposes of paragraph (a), *AEMO* must advise the *Network Service Provider* as to whether it is satisfied with the matters referred to paragraph (b).

5.3A Establishing or modifying connection - embedded generation

5.3A.A1 Definitions

(a) **[Deleted.]**

~~**[Deleted]**~~

(b) For the purposes of this rule 5.3A ~~rule 5.3A.A1~~ and Schedules 5.4A and 5.4B:

detailed response means the response to a *connection* enquiry prepared under clause 5.3A.8.

establish a connection has the same meaning as in clause 5.3.1.

information pack means information relevant to the making of an *application to connect* specified in clause 5.3A.3(b).

preliminary response means the response to a *connection* enquiry prepared under clause 5.3A.7.

sub-transmission line has the same meaning as in clause 5.10.2.

zone substation has the same meaning as in clause 5.10.2.

5.3A.1 Application of rule 5.3A

(a) **[Deleted]**

~~**[Deleted]**~~

(b) Where a *Connection Applicant* wishes to connect an *embedded generating unit*, this rule 5.3A applies.

(c) For the purposes of this rule 5.3A and Schedules 5.4A and 5.4B:

(1) a reference to a *Connection Applicant* is to a:

(i) person who intends to be an *Embedded Generator*;

(ii) person who is required to apply to *AEMO* for an exemption from the requirement to register as a *Generator* in respect of an *embedded generating unit*; ~~or~~

(iii) *non-registered embedded generator* who has made an election under clause 5A.A.2(c)~~.~~; or

(iv) a person (including a *non-registered embedded generator*) who is seeking *connection* for a *large inverter based resource*,

and who makes a *connection* enquiry under clause 5.3A.5 or an *application to connect* under clause 5.3A.9 in relation to any *generating systems*, or any *network elements* used in the provision of a *network service*, as the case may be.

(2) the *Distribution Network Service Provider* is the *Distribution Network Service Provider* required under clause 5.3A.5 to process and respond to a *connection* enquiry or required under clause 5.3A.10 to prepare an offer to *connect* for the establishment or modification of a *connection* to the *distribution network* owned, controlled or operated by that *Distribution Network Service Provider* or for the provision of a *network service*.

5.3A.2 Miscellaneous

(a) **[Deleted]**

~~**[Deleted]**~~

(b) To the extent a *Distribution Network Service Provider* has provided information required to be provided under this clause 5.3A by the inclusion of that information in:

(1) its *demand side engagement document* under clause 5.13.1(g); or

(2) a *Distribution Annual Planning Report*,

it will comply with the relevant information provision requirements of rule 5.3A by including hyperlinks to the relevant information in information provided to a *Connection Applicant*.

(c) Where this rule 5.3A fixes a time limit for the provision of information or a response then, for the purposes of calculating elapsed time, the period that:

(1) commences on the day when a dispute is initiated under clause 8.2.4(a); and

(2) ends on the day on which the dispute is withdrawn or is resolved in accordance with clauses 8.2.6D or 8.2.9(a),

is to be disregarded.

5.3A.3 Publication of Information

(a) A *Distribution Network Service Provider* must *publish* the following in the same location on its website:

(1) an enquiry form for *connection* of an *embedded generating unit*;

(2) a register of completed embedded generation projects under rule 5.18B; and

(3) an *information pack*.

(b) An *information pack* must include:

(1) a description of the process for lodging an *application to connect* for an *embedded generating unit*, including:

(i) the purpose of each stage of the *connection* enquiry and application processes;

(ii) the steps a *Connection Applicant* will need to follow at each stage of the *connection* enquiry and application processes;

(iii) the information that is to be included by the *Connection Applicant* with a *connection* enquiry and the information that will be made available to the *Connection Applicant* by the *Distribution Network Service Provider* at each stage of the *connection* enquiry;

(iv) the information that is to be included with an *application to connect* and the type of information that will be made available to the *Connection Applicant* by the *Distribution Network Service Provider* after lodgement of the application;

(v) the factors taken into account by the *Distribution Network Service Provider*, at each stage of the *connection* enquiry and application, when assessing an *application to connect* for an *embedded generating unit*;

(vi) the process for negotiating *negotiated access standards* under clause 5.3.4A and any *system strength remediation scheme* under clause 5.3.4B and a summary of the factors the *Distribution Network Service Provider* takes into account when considering proposed *negotiated access standards* and *system strength remediation schemes* and where applicable, in determining the *system strength locational factor*; and

(vii) a list of services, if any, relevant to the *connection* that are *contestable* in the relevant *participating jurisdiction*;

(2) single line diagrams of the *Distribution Network Service Provider's* preferred *connection* arrangements, and a range of other possible *connection* arrangements for integration of an *embedded generating unit*, showing the *connection point*, the point of common coupling, the *embedded generating unit(s)*, *load(s)*, *meter(s)*, circuit breaker(s) and isolator(s);

(3) a sample schematic diagram of the *protection system* and *control system* relevant to the *connection* of an *embedded generating unit* to the *distribution network*, showing the *protection system* and *control system*, including all relevant current circuits, relay potential circuits, alarm and monitoring circuits, back-up systems and parameters of protection and *control system* elements;

(4) worked examples of *connection service* charges, enquiry and application fees for the *connection* of *embedded generating units*, based

on the preferred and possible *connection* arrangements set out in paragraph (b)(2);

(5) details of any *minimum access standards* or *plant standards* the *Distribution Network Service Provider* considers are applicable to *embedded generating units* and *generating plant*;

(6) technical requirements relevant to the processing of a *connection* enquiry or an *application to connect*, including information of the type, but not limited to:

(i) *protection systems* and protection schemes;

(ii) fault level management principles;

(iii) *reactive power capability* and *power factor* correction;

(iv) power quality and how limits are allocated;

(v) responses to *frequency* and *voltage* disturbances;

(vi) *voltage* control and regulation;

(vii) *remote monitoring equipment*, control and communication requirements;

(viii) earthing requirements and other relevant safety requirements;

(ix) circumstances in which *augmentation* may be required to facilitate integration of an *embedded generating unit* into the *network*;

(x) commissioning and testing requirements; and

(xi) circumstances in which a *system strength remediation scheme* or *system strength connection works* will be required as a condition of *connection*; and

(7) model *connection agreements* used by that *Distribution Network Service Provider*.

5.3A.9 Application for connection

(a) Following receipt of a *detailed response* under clause 5.3A.8, a *Connection Applicant* may make an *application to connect* in accordance with this clause 5.3A.9, clause 5.3.4A and clause 5.3.4B.

(b) To be eligible for *connection*, the *Connection Applicant* must submit an *application to connect* containing the information specified in the *detailed response* provided under clause 5.3A.8(c) and the application fee specified under clause S5.4B(m) to the *Distribution Network Service Provider* and (except where, under clause 5.3.4B(a3), the *Network Service Provider* is not required to calculate the *system strength locational factor*) the *Connection Applicant's* election under clause 5.3.4B(b1).

(c) The *Connection Applicant* may submit an *application to connect* to more than one *Distribution Network Service Provider* in order to receive additional offers to *connect* in respect of *facilities* to be provided that are *contestable*.

(d) If the *application to connect* is incomplete in a material respect the *Distribution Network Service Provider* must, within 10 *business days* after

receipt of it, advise the *Connection Applicant* of the deficiency, and the steps required to address it.

(e) To the extent that an application fee includes amounts to meet the reasonable costs anticipated to be incurred by any other *Network Service Providers* or *AEMO* in the assessment of the *application to connect*, a *Distribution Network Service Provider* who receives the *application to connect* and associated fee must pay such amounts to the other *Network Service Providers* or *AEMO*, as appropriate.

(f) For each technical requirement where the proposed arrangement will not meet the *automatic access standards* nominated by the *Distribution Network Service Provider* pursuant to clause S5.4B(b), the *Connection Applicant* must submit with the *application to connect* a proposal for a *negotiated access standard* for each such requirement to be determined in accordance with clause 5.3.4A.

(g) The *Connection Applicant* may:

(1) lodge separate *applications to connect* and separately liaise with the other *Network Service Providers* identified in clause 5.3A.5(e) who may require a form of agreement; or

(2) lodge one *application to connect* with the *Distribution Network Service Provider* who processed the *connection* enquiry and require it to liaise with those other *Network Service Providers* and obtain and present all necessary draft agreements to the *Connection Applicant*.

(h) A *Connection Applicant* who proposes a *system strength remediation scheme* under clause 5.3.4B must submit its proposal with the *application to connect*.

Part D Network Planning and Expansion

5.12 Transmission annual planning process

5.12.2 Transmission Annual Planning Report

(a) Subject to paragraph (b), by 31 October each year all *Transmission Network Service Providers* must *publish* a *Transmission Annual Planning Report* setting out the results of the annual planning review conducted in accordance with clause 5.12.1.

(b) If a *Network Service Provider* is a *Transmission Network Service Provider* only because it owns, operates or controls *dual function assets* then it may *publish* its *Transmission Annual Planning Report* in the same document and at the same time as its *Distribution Annual Planning Report*.

(c) The *Transmission Annual Planning Report* must be consistent with the *TAPR Guidelines* and set out:

(1) the forecast *loads* submitted by a *Distribution Network Service Provider* in accordance with clause 5.11.1 or as modified in accordance with clause 5.11.1(d), including at least:

(i) a description of the forecasting methodology, sources of input information, and the assumptions applied in respect of the forecast *loads*;

(ii) a description of high, most likely and low growth scenarios in respect of the forecast *loads*;

(iii) an analysis and explanation of any aspects of forecast *loads* provided in the *Transmission Annual Planning Report* that have changed significantly from forecasts provided in the *Transmission Annual Planning Report* from the previous year; and

(iv) an analysis and explanation of any aspects of forecast *loads* provided in the *Transmission Annual Planning Report* from the previous year which are significantly different from the actual outcome;

(1A) for all *network* asset retirements, and for all *network* asset de-ratings that would result in a *network constraint*, that are planned over the minimum planning period specified in clause 5.12.1(c), the following information in sufficient detail relative to the size or significance of the asset:

(i) a description of the *network* asset, including location;

(ii) the reasons, including methodologies and assumptions used by the *Transmission Network Service Provider* for deciding that it is necessary or prudent for the *network* asset to be retired or *de-rated*, taking into account factors such as the condition of the *network* asset;

(iii) the date from which the *Transmission Network Service Provider* proposes that the *network* asset will be retired or *de-rated*; and

(iv) if the date to retire or *de-rate* the *network* asset has changed since the previous *Transmission Annual Planning Report*, an explanation of why this has occurred;

(1B) for the purposes of subparagraph (1A), where two or more *network* assets are:

(i) of the same type;

(ii) to be retired or *de-rated* across more than one location;

(iii) to be retired or *de-rated* in the same calendar year; and

(iv) each expected to have a replacement cost less than $200,000 (as varied by a *cost threshold determination*),

those assets can be reported together by setting out in the *Transmission Annual Planning Report*:

(v) a description of the *network* assets, including a summarised description of their locations;

(vi) the reasons, including methodologies and assumptions used by the *Transmission Network Service Provider*, for deciding that it is necessary or prudent for the *network* assets to be retired or *de-rated*, taking into account factors such as the condition of the *network* assets;

(vii) the date from which the *Transmission Network Service Provider* proposes that the *network* assets will be retired or *de-rated*; and

(viii) if the calendar year to retire or *de-rate* the *network* assets has changed since the previous *Transmission Annual Planning Report*, an explanation of why this has occurred;

(2) planning proposals for future *connection points*;

(3) a forecast of *constraints* and inability to meet the *network* performance requirements set out in schedule 5.1 or relevant legislation or regulations of a *participating jurisdiction* over 1, 3 and 5 years, including at least:

(i) a description of the *constraints* and their causes;

(ii) the timing and likelihood of the *constraints*;

(iii) a brief discussion of the types of planned future projects that may address the *constraints* over the next 5 years, if such projects are required; and

(iv) sufficient information to enable an understanding of the *constraints* and how such forecasts were developed;

(4) in respect of information required by subparagraph (3), where an estimated reduction in forecast *load* would defer a forecast *constraint* for a period of 12 months, include:

(i) the year and months in which a *constraint* is forecast to occur;

(ii) the relevant *connection points* at which the estimated reduction in forecast *load* may occur;

(iii) the estimated reduction in forecast *load* in MW needed; and

(iv) a statement of whether the *Transmission Network Service Provider* plans to issue a request for proposals for *augmentation*, replacement of *network* assets, or a *non-network option* identified by the annual planning review conducted under clause 5.12.1(b) and if so, the expected date the request will be issued;

(5) for all proposed *augmentations* to the *network* and proposed replacements of *network* assets the following information, in sufficient detail relative to the size or significance of the project and the proposed operational date of the project:

(i) project/asset name and the month and year in which it is proposed that the asset will become operational;

(ii) the reason for the actual or potential *constraint*, if any, or inability, if any, to meet the *network* performance requirements set out in schedule 5.1 or relevant legislation or regulations of a *participating jurisdiction,* including *load* forecasts and all assumptions used;

(iii) the proposed solution to the *constraint* or inability to meet the *network* performance requirements identified in subparagraph (ii), if any;

(iv) total cost of the proposed solution;

(v) whether the proposed solution will have a *material inter-network impact*. In assessing whether an *augmentation* to the *network* will have a *material inter-network impact* a *Transmission Network Service Provider* must have regard to the objective set of criteria *published* by *AEMO* in accordance with clause 5.21 (if any such criteria have been *published* by *AEMO*); and

(vi) other reasonable *network options* and *non-network options* considered to address the actual or potential *constraint* or inability to meet the *network* performance requirements identified in subparagraph (ii), if any. Other reasonable *network* and *non-network options* include, but are not limited to, *interconnectors*, *generation* options, demand side options, *market network service* options and options involving other *transmission* and *distribution networks*;

(6) the manner in which the proposed *augmentations* and proposed replacements of *network* assets relate to the most recent *Integrated System Plan*;

(6A) for proposed new or modified *emergency frequency control schemes*, the manner in which the project relates to the most recent *general power system risk review*;

(6B) information about which parts of its *transmission network* are *designated network assets* and the identities of the owners of those *designated network assets*;

(7) information on the *Transmission Network Service Provider's asset management* approach, including:

(i) a summary of any *asset management* strategy employed by the *Transmission Network Service Provider*;

(ii) a summary of any issues that may impact on the system *constraints* identified in the *Transmission Annual Planning Report* that has been identified through carrying out *asset management*; and

(iii) information about where further information on the *asset management* strategy and methodology adopted by the *Transmission Network Service Provider* may be obtained.

(8) any information required to be included in a *Transmission Annual Planning Report* under:

(i) clauses 5.16.3(c) and 5.16A.3 in relation to a *network* investment which is determined to be required to address an urgent and unforeseen *network* issue; or

(ii) clauses 5.20B.4(h) and (i) and clauses 5.20C.3(f) and (g) in relation to *network* investment and other activities to: ~~provide *inertia network services*, *inertia support activities* or *system strength services*~~

(A) provide *inertia network services* or *inertia support activities*; or

(B) meet the standard in clause S5.1.14 in relation to a *system strength node*;~~.~~

(9) emergency controls in place under clause S5.1.8, including the *Network Service Provider's* assessment of the need for new or altered emergency controls under that clause;

(9a) the analysis of the operation of, and any known or potential interactions between:

(i) any *emergency frequency control schemes*, or emergency controls place under clause S5.1.8, on its *network*; and

(ii) *protection systems* or *control systems* of *plant connected* to its *network* (including consideration of whether the settings of those systems are fit for purpose for the future operation of its *network*),

undertaken under clause 5.12.1(b)(7), including a description of proposed actions to be undertaken to revise those schemes, controls or systems, or to address any adverse interactions.

(10) *facilities* in place under clause S5.1.10;

(11) an analysis and explanation of any other aspects of the *Transmission Annual Planning Report* that have changed significantly from the preceding year's *Transmission Annual Planning Report*, including the reasons why the changes have occurred;~~ and~~

(12) the results of joint planning (if any) undertaken with a *Transmission Network Service Provider* under clause 5.14.3 in the preceding year, including a summary of the process and methodology used by the *Transmission Network Service Providers* to undertake joint planning and the outcomes of that joint planning~~.~~; and

(13) the *system strength locational factor* for each *system strength connection point* for which it is the *Network Service Provider* and the corresponding *system strength node*.

(d) A *declared transmission system operator* for all or part of the *declared shared network* must provide to *AEMO* within a reasonable period of receiving a request, such information as reasonably requested by *AEMO* to enable it to comply with:

(1) clause 5.12.1(b)(5);

(2) clause 5.12.1(b)(6);

(3) clause 5.12.2(c)(1A);

(4) clauses 5.12.2(c)(4), (5) and (6) as they relate to the proposed replacement of *network* assets; and

(5) clause 5.12.2(c)(7).

5.14 Joint planning

5.14.1 Joint planning obligations of Transmission Network Service Providers and Distribution Network Service Providers

(a) Subject to paragraphs (b) and (c):

(1) each *Distribution Network Service Provider* must conduct joint planning with each *Transmission Network Service Provider* of the *transmission networks* to which the *Distribution Network Service Provider's networks* are *connected*; and

Note

This subparagraph is classified as a tier 1 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) each *Transmission Network Service Provider* must conduct joint planning with each *Distribution Network Service Provider* of the *distribution networks* to which the *Transmission Network Service Provider's networks* are *connected*.

Note

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

(b) In the case of the *declared shared network* of an *adoptive jurisdiction*, the relevant *declared transmission system operator*, the relevant *Distribution Network Service Provider*, *AEMO* and any *interested party* that has informed *AEMO* of its interest in the relevant plans, shall conduct joint planning.

Note

This paragraph is classified as a tier 1 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) For the purposes of this clause 5.14.1, a *Transmission Network Service Provider* does not include a *Network Service Provider* that is a *Transmission Network Service Provider* only because it owns, controls or operates *dual function assets*.

(d) The relevant *Distribution Network Service Provider* and *Transmission Network Service Provider* must:

(1) assess the adequacy of existing *transmission* and *distribution networks* and the assets associated with *transmission-distribution connection points* over the next five years and to undertake joint planning of projects which relate to both *networks* (including, where relevant, *dual function assets*);

(2) use best endeavours to work together to ensure efficient planning outcomes and to identify the most efficient options to address the needs identified in accordance with subparagraph (4);

(3) identify any limitations or constraints:

(i) that will affect both the *Transmission Network Service Provider's* and *Distribution Network Service Provider's network*; or

(ii) which can only be addressed by corrective action that will require coordination by the *Transmission Network Service Provider* and the *Distribution Network Service Provider*;

(3a) assess the known or potential interactions between:

(i) any *emergency frequency control schemes*, or emergency controls in place under clause S5.1.8, on their *networks*; and

(ii) *protection systems* or *control systems* of *plant connected* to their *networks*,

as identified under clauses 5.12.1(b)(7) and 5.13.1(d)(6) with a view to addressing any adverse impacts through joint planning; and

(4) where the need for a *joint planning project* is identified under subparagraphs (3) or (3a):

(i) jointly determine plans that can be considered by relevant *Registered Participants*, *AEMO*, *interested parties*, and parties registered on the *demand side engagement register* of each *Distribution Network Service Provider* involved in joint planning;

(ii) determine whether the *joint planning project* is a *RIT-T project* or a *RIT-D project*; and

(iii) may agree on a lead party to be responsible for carrying out the *regulatory investment test for transmission* or the *regulatory investment test for distribution* (as the case may be) in respect of the *joint planning project*.

Note

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

(e) If a *Network Service Provider*, as the lead party for one or more *Network Service Providers*, undertakes the *regulatory investment test for transmission* or the *regulatory investment test for distribution* (as the case may be) in respect of a *joint planning project*, the other *Network Service Providers* will be taken to have discharged their obligation to undertake the relevant test in respect of that project.

5.14.2 Joint planning obligations of Distribution Network Service Providers and Distribution Network Service Providers

(a) *Distribution Network Service Providers* must undertake joint planning with other *Distribution Network Service Providers* where there is a requirement to consider the need for any *augmentation* or *non-network options* that affect more than one *Distribution Network Service Provider's network*.

(b) *Distribution Network Service Providers* involved in joint planning may agree on a lead party to be responsible for carrying out the *regulatory investment test for distribution* in respect of the *joint planning project*.

(c) If a *Distribution Network Service Provider*, as the lead party for one or more *Distribution Network Service Providers*, undertakes the *regulatory investment test for distribution* in respect of a *joint planning project*, the other *Distribution Network Service Providers* will be taken to have discharged their obligation to undertake the *regulatory investment test for distribution* in respect of that project.

5.14.3 Joint planning obligations of Transmission Network Service Providers

Transmission Network Service Providers must undertake joint planning:

(a) if a possible credible option to address a *constraint* in a *transmission network* is an *augmentation* to the *transmission network* of another *Transmission Network Service Provider*, and that *constraint* is not already being considered under other processes under the *Rules*; or

(b) to assess the known or potential interactions between:

(1) any *emergency frequency control schemes*, or emergency controls in place under clause S5.1.8, on their *networks*; and

(2) *protection systems* or *control systems* of *plant connected* to their *networks*,

as identified under clause 5.12.1(b)(7) with a view to addressing any adverse impacts through joint planning.

5.14.4 Joint ISP and system strength planning by Transmission Network Service Providers and AEMO

(a) Subject to paragraph (d), *Transmission Network Service Providers* and *AEMO* (the joint planning parties) must take reasonable steps to cooperate and consult with each other to enable preparation of a draft or final *Integrated System Plan* or an *ISP update*, including each joint planning party (as applicable):

(1) providing, and consulting on, a *Transmission Annual Planning Report* prior to its publication;

(2) providing, in accordance with the *ISP timetable*, the latest available information in relation to the development of a *Transmission Annual Planning Report* required for the purpose of preparing a draft or final *Integrated System Plan* or *ISP update*;

(3) providing information in relation to *non-network options* for the purpose of preparing a draft or final *Integrated System Plan* or *ISP update*;

(4) conducting a preliminary review of *non-network options* submitted to *AEMO* following a draft *Integrated System Plan*;

(5) sharing a draft *optimal development path* to be included in the draft and final *Integrated System Plan* or an *ISP update* before its publication;

(6) considering whether a credible option in a draft *optimal development path* is *reliability corrective action*; and

(7) sharing information reasonably necessary to prepare a draft or final *Integrated System Plan* or an *ISP update*.

(b) As soon as practicable after a *Transmission Network Service Provider* becomes aware of a material change to information provided under paragraph (a), that information must be updated.

(c) *AEMO* must provide *Transmission Network Service Providers* with draft regional demand forecasts for the next summer period informed by the previous summer period as soon as practicable, and by no later than 30 June each year.

(d) For the purposes of paragraph (a), where a *Transmission Network Service Provider* is not the *jurisdictional planning body, AEMO* must provide to the *Transmission Network Service Provider* information in relation to the preparation of any *REZ design report* under clause 5.24.1(b)(1).

(e) *System Strength Service Providers* and *AEMO* must take reasonable steps to cooperate and consult with each other in relation to:

(1) possible *credible options* for a *System Strength Service Provider* to provide the *system strength requirements* for a *system strength node*; and

(2) the technical specification and performance standards for any proposed *system strength service*.

5.15A Regulatory investment test for transmission

5.15A.1 General principles and application

(a) The *AER* must develop and *publish* the *regulatory investment test for transmission* in accordance with the *transmission consultation procedures* and this rule 5.15A.

(b) The *regulatory investment test for transmission* will apply to *RIT-T projects* which are not *actionable ISP* projects (in accordance with rule 5.16) and to *RIT-T projects* which are *actionable ISP projects* (in accordance with rule 5.16A) but will differ in its application to each of those types of projects.

(c) The purpose of the *regulatory investment test for transmission* in respect of its application to both types of projects is to identify the *credible option* that maximises the present value of net economic benefit to all those who produce, consume and transport electricity in the *market* (the *preferred option*). For the avoidance of doubt, a *preferred option* may, in the relevant circumstances, have a negative net economic benefit (that is, a net economic cost) to the extent the *identified need* is for *reliability corrective action* or the provision of *inertia network services* required under clause 5.20B.4 ~~or the provision of *system strength services* required under clause 5.20C.3~~.

(d) The *regulatory investment test for transmission application guidelines* under clause 5.16.2 apply to *RIT-T projects* which are not *actionable ISP projects*.

(e) The *Cost Benefit Analysis Guidelines* under clause 5.22.5 apply to *RIT-T projects* which are *actionable ISP projects*.

5.15A.2 Principles for RIT-T projects which are not actionable ISP projects

(a) This clause 5.15A.2 only applies in respect of the application of the *regulatory investment test for transmission* to *RIT-T projects* that are not *actionable ISP projects*.

(b) The *regulatory investment test for transmission* must:

(1) be based on a cost-benefit analysis that is to include an assessment of reasonable scenarios of future supply and demand if each *credible option* were implemented compared to the situation where no option is implemented;

(2) not require a level of analysis that is disproportionate to the scale and likely impact of each of the *credible options* being considered;

(3) be capable of being applied in a predictable, transparent and consistent manner;

(4) require the *RIT-T proponent* to consider the following classes of market benefits that could be delivered by the *credible option*:

(i) changes in fuel consumption arising through different patterns of *generation dispatch*;

(ii) changes in voluntary *load* curtailment;

(iii) changes in involuntary *load shedding*, with the market benefit to be considered using a reasonable forecast of the value of electricity to consumers;

(iv) changes in costs for parties, other than the *RIT-T proponent*, due to:

(A) differences in the timing of new *plant*;

(B) differences in capital costs; and

(C) differences in the operating and maintenance costs;

(v) differences in the timing of expenditure;

(vi) changes in *network* losses;

(vii) changes in *ancillary services* costs;

(viii) competition benefits;

(ix) any additional option value (where this value has not already been included in the other classes of market benefits) gained or foregone from implementing that *credible option* with respect to the likely future investment needs of the *market*; and

(x) other classes of market benefits that are:

(A) determined to be relevant by the *RIT-T proponent* and agreed to by the *AER* in writing before the date the relevant *project specification consultation report* is made available to other parties under clause 5.16.4; or

(B) specified as a class of market benefit in the *regulatory investment test for transmission*;

(5) require a *RIT-T proponent* to include a quantification of all classes of market benefits which are determined to be material in the *RIT-T proponent's* reasonable opinion;

(6) require a *RIT-T proponent* to consider all classes of market benefits as material unless it can, in the *project assessment draft report*, or in respect of a proposed *preferred option* which is subject to the exemption contained in clause 5.16.4(z1), in the *project specification consultation report*, provide reasons why:

(i) a particular class of market benefit is likely not to affect materially the outcome of the assessment of the *credible options* under the *regulatory investment test for transmission*; or

(ii) the estimated cost of undertaking the analysis to quantify the market benefit is likely to be disproportionate to the scale, size and potential benefits of each *credible option* being considered in the report;

(7) with respect to the classes of market benefits set out in subparagraphs (4)(ii) and (iii), ensure that, if the *credible option* is for *reliability corrective action*, the quantification assessment required by paragraph (5) will only apply insofar as the market benefit delivered by the *credible option* exceeds the minimum standard required for *reliability corrective action*;

(8) require the RIT-T proponent to quantify the following classes of costs:

(i) costs incurred in constructing or providing the *credible option*;

(ii) operating and maintenance costs in respect of the *credible option*;

(iii) the cost of complying with laws, regulations and applicable administrative requirements in relation to the construction and operation of the *credible option*; and

(iv) any other class of costs that are:

(A) determined to be relevant by the *RIT-T proponent* and agreed to by the *AER* in writing before the date the relevant *project specification consultation report* is made available to other parties under clause 5.16.4; or

(B) specified as a class of cost in the *regulatory investment test for transmission*;

(9) provide that any cost or market benefit which cannot be measured as a cost or market benefit to *Generators*, *Distribution Network Service Providers*, *Transmission Network Service Providers* or consumers of electricity may not be included in any analysis under the *regulatory investment test for transmission*;

(10) specify:

(i) the method or methods permitted for estimating the magnitude of the different classes of market benefits;

(ii) the method or methods permitted for estimating the magnitude of the different classes of costs;

(iii) the method or methods permitted for estimating market benefits which may occur outside the region in which the *networks* affected by the *RIT-T project* are located; and

(iv) the appropriate method and value for specific inputs, where relevant, for determining the discount rate or rates to be applied;

(11) specify that a sensitivity analysis is required of any modelling relating to the cost-benefit analysis; and

(12) reflect that the *credible option* that maximises the present value of net economic benefit to all those who produce, consume or transport electricity in the market may, in some circumstances, have a negative net economic benefit (that is, a net economic cost) where the *identified need* is for *reliability corrective action*.

5.15A.3 Principles for actionable ISP projects

(a) This clause 5.15A.3 only applies in respect of the application of the *regulatory investment test for transmission* to *RIT-T projects* that are *actionable ISP projects*.

(b) The *regulatory investment test for transmission* must:

(1) assess the costs and benefits of future supply and demand if each *credible option* were implemented compared to the case where that option is not implemented;

(2) not require a level of analysis that is disproportionate to the scale and likely impact of each of the *credible options* being considered;

(3) be capable of being applied in a predictable, transparent and consistent manner;

(4) require a *RIT-T proponent* to include a quantification of all classes of market benefits identified in the relevant *Integrated System Plan*, and may include consideration of other classes of market benefits, in accordance with the *Cost Benefit Analysis Guidelines*;

(5) with respect to the classes of market benefits set out in subparagraph (4), ensure that, if the *credible option* is for *reliability corrective action*, the quantification assessment required by subparagraph (4) will only apply insofar as the market benefit delivered by the *credible option* exceeds the minimum standard required for *reliability corrective action*;

(6) require the *RIT-T proponent* to quantify the following classes of costs:

(i) costs incurred in constructing or providing each *credible option*;

(ii) operating and maintenance costs in respect of each *credible option*;

(iii) the cost of complying with laws, regulations and applicable administrative requirements in relation to the construction and operation of each *credible option*; and

(iv) any other class of costs that are:

(A) determined to be relevant by the *RIT-T proponent* and agreed to by the *AER* in writing before the date the relevant *project assessment draft report* is made available to other parties under clause 5.16A.4; or

(B) specified as a class of cost in the *regulatory investment test for transmission*;

(7) specify that the *RIT-T proponent* must:

(i) comply with the Cost Benefit Assessment Guidelines;

(ii) adopt the *identified need* set out in the *Integrated System Plan* relevant to the *actionable ISP project*;

(iii) consider the following *credible options*:

(A) the *ISP candidate option* or *ISP candidate options*, which may include refinements of an *ISP candidate option*;

(B) *non-network options* identified in the *Integrated System Plan* as being reasonably likely to meet the relevant *identified need*, in accordance with clause 5.22.12(e)(1); and

(C) any new *credible options* that were not previously considered in the *Integrated System Plan* that meet the *identified need* (including any *non-network options* submitted to *AEMO* in accordance with clause 5.22.14(c)(1));

(iv) adopt the most recent *ISP parameters*, or if the *RIT-T proponent* decides to vary or omit an *ISP parameter*, or add a new parameter, then the *RIT-T proponent* must specify the *ISP parameter* which is new, omitted or has been varied and provide demonstrable reasons why the addition or variation is necessary;

(v) assess the market benefits with and without each *credible option*; and

(vi) in so far as practicable, adopt the market modelling from the *Integrated System Plan*;

(8) specify that the *RIT-T proponent* is not required to:

(i) consider any *credible option* that was previously considered in the *Integrated System Plan*, but does not form part of the *optimal development path*;

(ii) consider any *non-network options* identified in the *Integrated System Plan* as not meeting the relevant *identified need*, in accordance with clause 5.22.12(e)(2); or

(iii) request submissions for *non-network options*, or otherwise seek to identify *non-network options* in addition to those assessed in the *Integrated System Plan* under clause 5.22.12(d) or submitted to *AEMO* in accordance with clause 5.22.14(c)(1); and

(9) specify the *RIT-T proponent* may, but is not required to, consider *credible options* already considered and not included in the *optimal development path* in the *Integrated System Plan*.

5.16 Application of RIT-T to RIT-T projects which are not actionable ISP projects

5.16.3 Investments subject to the regulatory investment test for transmission

(a) A *RIT-T proponent* must apply the *regulatory investment test for transmission* to a *RIT-T project* except in circumstances where:

(1) the *RIT-T project* is required to address an urgent and unforeseen *network* issue that would otherwise put at risk the *reliability* of the *transmission network* as described in paragraph (b);

(2) the estimated capital cost of the most expensive option to address the *identified need* which is technically and economically feasible is less than $5 million (as varied in accordance with a *cost threshold determination*);

(3) the proposed expenditure relates to maintenance and is not intended to *augment* the *transmission network* or replace *network* assets;

(4) [**Deleted**];

(5) the proposed relevant *network* investment is an investment undertaken by a *Transmission Network Service Provider* which:

(i) re-routes one or more paths of a *network* for the long term; and

(ii) has a substantial primary purpose other than the need to *augment* a *network*,

(a *reconfiguration investment*) and which the *RIT-T proponent* reasonably estimates to have an estimated capital cost of less than $5 million (as varied in accordance with a *cost threshold determination*) or which has, or is likely to have, no material impact on *network* users;

(6) the *identified need* can only be addressed by expenditure on a *connection asset* which provides services other than *prescribed transmission services* or *standard control services*;

(7) the cost of addressing the *identified need* is to be fully recovered through charges other than charges in respect of *prescribed transmission services* or *standard control services*;

(8) the proposed expenditure relates to *protected event EFCS investment* and is not intended to *augment* the *transmission network*; or

(9) the proposed expenditure is an *inertia service payment* ~~or a *system strength service payment*~~; or

(10) the proposed expenditure is for *network* investment undertaken by the *Transmission Network Service Provider* to satisfy its obligation as an *Inertia Service Provider* under clause 5.20B.4 to make available *inertia*

network services in relation to an *inertia shortfall* for an *inertia sub-network* and:

(i) immediately prior to the notice of the *inertia shortfall* being given by *AEMO* under clause 5.20B.3(c), the *Inertia Service Provider* is not under an obligation to provide *inertia network services* for that *inertia sub-network* (including under rule 11.100); and

(ii) the time by which the *Inertia Service Provider* must make the *inertia network services* available is less than 18 months after the notice is given by *AEMO* under clause 5.20B.3(c).~~; or~~

~~(11) the proposed expenditure is for *network* investment undertaken by the *Transmission Network Service Provider* to satisfy its obligation as a *System Strength Service Provider* under clause 5.20C.3 to make available *system strength services* in relation to a *fault level shortfall* for a *fault level node* and:~~

~~(i) immediately prior to the notice of the *fault level shortfall* being given by *AEMO* under clause 5.20C.2(c), the *System Strength Service Provider* is not under an obligation to provide *system strength services* for that *fault level node* (including under rule 11.101); and~~

~~(ii) the time by which the *System Strength Service Provider* must make the *system strength services* available is less than 18 months after the notice is given by *AEMO* under clause 5.20C.2(c).~~

Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(b) For the purposes of paragraph (a)(1), a *RIT-T project* will be required to address an urgent and unforeseen *network* issue that would otherwise put at risk the *reliability* of the *transmission network* if:

(1) it is necessary that the assets or services to address the issue be operational within 6 months of the issue being identified;

(2) the event or circumstances causing the *identified need* was not reasonably foreseeable by, and was beyond the reasonable control of, the *Network Service Provider(s)* that identified the *identified need*;

(3) a failure to address the *identified need* is likely to materially adversely affect the *reliability* and *secure operating state* of the *transmission network*; and

(4) it is not a *contingent project*.

(c) If a proposed relevant *network* investment is determined to be required to address an urgent and unforeseen *network* issue as described in paragraph (b), and the *Network Service Provider* making the investment is a *Transmission Network Service Provider*, then the *Transmission Network Service Provider* must provide the following information in its next *Transmission Annual Planning Report* following the identification of the need for the relevant *network* investment:

(1) the date when the proposed relevant *network* investment became or will become operational;

(2) the purpose of the proposed relevant *network* investment; and

(3) the total cost of the proposed relevant *network* investment.

(d) With the exception of *funded augmentations*, for each *RIT-T project* to which the *regulatory investment test for transmission* does not apply in accordance with paragraph (a), the *Network Service Providers* affected by the *RIT-T project* must ensure, acting reasonably, that the investment required to address the *identified need* is planned and developed at least cost over the life of the investment.

(e) A *RIT-T proponent* must not treat different parts of an integrated solution to an *identified need* as distinct and separate options for the purposes of determining whether the *regulatory investment test for transmission* applies to each of those parts.

5.16.4 Regulatory investment test for transmission procedures

(a) If a *RIT-T project* is subject to the *regulatory investment test for transmission* under clause 5.16.3, then the *RIT-T proponent* must consult all *Registered Participants*, *AEMO* and *interested parties* on the *RIT-T project* in accordance with this clause 5.16.4.

Note

This paragraph is classified as a tier 3 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

Project specification consultation report

(b) A *RIT-T proponent* must prepare a report (the *project specification consultation report*), which must include:

(1) a description of the *identified need*;

(2) the assumptions used in identifying the *identified need* (including, in the case of proposed *reliability corrective action*, why the *RIT-T proponent* considers reliability corrective action is necessary);

(3) the technical characteristics of the *identified need* that a non-network option would be required to deliver, such as:

(i) the size of *load* reduction or additional supply;

(ii) location; and

(iii) operating profile;

(4) if applicable, reference to any discussion on the description of the identified need or the credible options in respect of that *identified need* in the most recent *Integrated System Plan*;

(5) a description of all credible options of which the *RIT-T proponent* is aware that address the *identified need*, which may include, without limitation, alternative *transmission* options, *interconnectors*, *generation*, *system strength services*, demand side management, *market network services* or other *network options*;

(6) for each credible option identified in accordance with subparagraph (5), information about:

(i) the technical characteristics of the credible option;

(ii) whether the credible option is reasonably likely to have a *material inter-network impact*;

(iii) the classes of market benefits that the *RIT-T proponent* considers are likely not to be material in accordance with clause 5.15A.2(b)(6), together with reasons of why the *RIT-T proponent* considers that these classes of market benefits are not likely to be material;

(iv) the estimated construction timetable and commissioning date; and

(v) to the extent practicable, the total indicative capital and operating and maintenance costs.

(c) The *RIT-T proponent* must make the *project specification consultation report* available to all *Registered Participants*, *AEMO* and other *interested parties*.

(d) The *RIT-T proponent* must:

(1) provide a summary of the *project specification consultation report* to *AEMO* within 5 *business days* of making the *project specification consultation report*; and

(2) upon request by an *interested party*, provide a copy of the *project specification consultation report* to that person within 3 *business days* of the request.

(e) Within 3 *business days* of receipt of the summary, *AEMO* must *publish* the summary of the *project specification consultation report* on its website.

(f) The *RIT-T proponent* must seek submissions from *Registered Participants*, *AEMO* and *interested parties* on the credible options presented, and the issues addressed, in the *project specification consultation report*.

(g) The period for consultation referred to in paragraph (f) must be not less than 12 weeks from the date that *AEMO publishes* the summary of the *project specification consultation report* on its website.

(h) A *RIT-T proponent* that is a *Transmission Network Service Provider* may discharge its obligation under paragraph (c) to make the *project specification consultation report* available by including the *project specification consultation report* as part of its *Transmission Annual Planning Report*.

(i) A *RIT-T proponent* that is a *Distribution Network Service Provider* may discharge its obligation under paragraph (c) to make the *project specification consultation report* available by including the *project specification consultation report* as part of its *Distribution Annual Planning Report*.

Project assessment draft report

(j) If one or more *Network Service Providers* wishes to proceed with a *RIT-T project*, within 12 months of the end date of the consultation period referred to in paragraph (g), or such longer time period as is agreed in writing by the *AER*, the *RIT-T proponent* for the relevant *RIT-T project* must prepare a report

(the *project assessment draft report*), having regard to the submissions received, if any, under paragraph (f) and make that report available to all *Registered Participants*, *AEMO* and *interested parties*.

(k) The *project assessment draft report* must include:

(1) a description of each credible option assessed;

(2) a summary of, and commentary on, the submissions to the *project specification consultation report*;

(3) a quantification of the costs, including a breakdown of operating and capital expenditure, and classes of material market benefit for each credible option;

(4) a detailed description of the methodologies used in quantifying each class of material market benefit and cost;

(5) reasons why the *RIT-T proponent* has determined that a class or classes of market benefit are not material;

(6) the identification of any class of market benefit estimated to arise outside the *region* of the *Transmission Network Service Provider* affected by the *RIT-T project*, and quantification of the value of such market benefits (in aggregate across all regions);

(7) the results of a net present value analysis of each credible option and accompanying explanatory statements regarding the results;

(8) the identification of the proposed *preferred option*;

(9) for the proposed preferred option identified under subparagraph (8), the *RIT-T proponent* must provide:

(i) details of the technical characteristics;

(ii) the estimated construction timetable and commissioning date;

(iii) if the proposed *preferred option* is likely to have a *material inter-network impact* and if the *Transmission Network Service Provider* affected by the *RIT-T project* has received an *augmentation technical report*, that report; and

(iv) a statement and the accompanying detailed analysis that the *preferred option* satisfies the *regulatory investment test for transmission*.

(l) If a *Network Service Provider* affected by a *RIT-T project* elects to proceed with a project which is for *reliability corrective action*, it can only do so where the proposed *preferred option* has a proponent. The *RIT-T proponent* must identity that proponent in the *project assessment draft report*.

(m) A *RIT-T proponent* that is a *Transmission Network Service Provider* may discharge its obligation under paragraph (j) to make the *project assessment draft report* available by including the *project assessment draft report* as part of its *Transmission Annual Planning Report* provided that report is *published* within 12 months of the end date of the consultation period required under paragraph (g) or within 12 months of the end of such longer time period as is agreed by the *AER* in writing under paragraph (j).

(n) A *RIT-T proponent* that is a *Distribution Network Service Provider* may discharge its obligation under paragraph (j) to make the *project assessment draft report* available by including the *project assessment draft report* as part of its *Distribution Annual Planning Report* provided that report is *published* within 12 months of the end date of the consultation period required under paragraph (g) or within 12 months of the end of such longer time period as is agreed by the *AER* in writing under paragraph (j).

(o) The *RIT-T proponent* must:

(1) provide a summary of the *project assessment draft report* to *AEMO* within 5 *business days* of making the *project assessment draft report*; and

(2) upon request by an *interested party*, provide a copy of the *project assessment draft report* to that person within 3 *business days* of the request.

(p) Within 3 *business days* of receipt of the summary, *AEMO* must *publish* the summary of the *project assessment draft report* on its website.

(q) The *RIT-T proponent* must seek submissions from *Registered Participants*, *AEMO* and *interested parties* on the *preferred option* presented, and the issues addressed, in the *project assessment draft report*.

(r) The period for consultation referred to in paragraph (q) must be not less than 6 weeks from the date that *AEMO publishes* the summary of the report on its website.

(s) Within 4 weeks after the end of the consultation period required under paragraph (r), at the request of an *interested party*, a *Registered Participant* or *AEMO* (each being a relevant party for the purposes of this paragraph), the relevant *Network Service Provider* must meet with the relevant party if a meeting is requested by two or more relevant parties and may meet with a relevant party if after having considered all submissions, the relevant *Network Service Provider*, acting reasonably, considers that the meeting is necessary.

Project assessment conclusions report

(t) As soon as practicable after the end of the consultation period on the *project assessment draft report* referred to in paragraph (r), the *RIT-T proponent* must, having regard to the submissions received, if any, under paragraph (q) and the matters discussed at any meetings held, if any, under paragraph (s), prepare and make available to all *Registered Participants*, *AEMO* and *interested parties* and *publish* a report (the *project assessment conclusions report*).

(u) If:

(1) the *RIT-T proponent* is exempt from making a *project assessment draft report* under paragraph (z1); and

(2) a *Network Service Provider* affected by a *RIT-T project*, within 12 months of the end date of the period for consultation referred to in paragraph (g), or within 12 months of the end date of such longer time period as is agreed in writing by the *AER* elects to proceed with the proposed *transmission investment*,

the relevant *Network Service Provider* must, having regard to the submissions received, if any, under paragraph (g) as soon as practicable prepare and make available to all *Registered Participants*, *AEMO* and *interested parties* and *publish* a report (the *project assessment conclusions report*).

(v) The *project assessment conclusions report* must set out:

(1) the matters detailed in the *project assessment draft report* as required under paragraph (k); and

(2) a summary of, and the *RIT-T proponent's* response to, submissions received, if any, from *interested parties* sought under paragraph (q).

(w) The *RIT-T proponent* must:

(1) provide a summary of the *project assessment conclusions report* to *AEMO* within 5 *business days* of making the *project assessment conclusions report*; and

(2) upon request by an *interested party*, provide a copy of the *project assessment conclusions report* to that person within 3 *business days* of the request.

(x) Within 3 *business days* of receipt of the summary, *AEMO* must *publish* the summary of the *project assessment conclusions report* on its website.

(y) A *RIT-T proponent* that is a *Transmission Network Service Provider* may discharge its obligation under paragraph (t) and (u) to make the *project assessment conclusions report* available by including the *project assessment conclusions report* as part of its *Transmission Annual Planning Report* provided that the report is *published* within 4 weeks from the date of making available the *project assessment conclusions report* under paragraph (t) or (u), as the case may be.

(z) A *RIT-T proponent* that is a *Distribution Network Service Provider* may discharge its obligation under paragraph (t) and (u) to make the *project assessment conclusions report* available by including the *project assessment conclusions report* as part of its *Distribution Annual Planning Report* provided that the report is *published* within 4 weeks from the date of making available the *project assessment conclusions report* under paragraph (t) or (u), as the case may be.

Exemption from drafting a project assessment draft report for RIT-T projects without material market benefits

(z1) A *RIT-T proponent* is exempt from paragraphs (j) to (s) if:

(1) the estimated capital cost of the proposed *preferred option* is less than $35 million (as varied in accordance with a *cost threshold determination*);

(2) the relevant *Network Service Provider* has identified in its *project specification consultation report*:

(i) its proposed *preferred option*;

(ii) its reasons for the proposed *preferred option*; and

(iii) that its *RIT-T project* has the benefit of this exemption;

(3) the *RIT-T proponent* considers, in accordance with clause 5.15A.2(b)(6), that the proposed *preferred option* and any other credible option in respect of the *identified need* will not have a material market benefit for the classes of market benefit specified in clause 5.15A.2(b)(4) except those classes specified in clauses 5.15A.2(b)(4)(ii) and (iii), and has stated this in its *project specification consultation report*; and

(4) the *RIT-T proponent* forms the view that no submissions were received on the *project specification consultation report* which identified additional credible options that could deliver a material market benefit.

(z2) The *RIT-T proponent* must address in the *project assessment conclusions report* any issues that were raised in relation to a proposed *preferred option* to which paragraph (z1) applies during the consultation on the *project specification consultation report*.

Reapplication of regulatory investment test for transmission

(z3) If:

(1) a *RIT-T proponent* has *published* a *project assessment conclusions report* in respect of a *RIT-T project*;

(2) a *Network Service Provider* still wishes to undertake the *RIT-T project* to address the *identified need*; and

(3) there has been a material change in circumstances which, in the reasonable opinion of the *RIT-T proponent* means that the *preferred option* identified in the *project assessment conclusions report* is no longer the *preferred option*,

then the *RIT-T proponent* must reapply the *regulatory investment test for transmission* to the *RIT-T project*, unless otherwise determined by the *AER*.

(z4) For the purposes of paragraph (z3), a material change in circumstances may include, but is not limited to, a change to the key assumptions used in identifying:

(1) the *identified need* described in the *project assessment conclusions report*; or

(2) the credible options assessed in the *project assessment conclusions report*.

(z5) When making a determination under paragraph (z3) the *AER* must have regard to:

(1) the credible options (other than the *preferred option*) identified in the *project assessment conclusions report*;

(2) the change in circumstances identified by the *RIT-T proponent*; and

(3) whether a failure to promptly undertake the *RIT-T project* is likely to materially affect the *reliability* and *secure operating state* of the *transmission network* or a significant part of that *network*.

Declared transmission system operator may request assistance from AEMO to conduct market benefits assessments for replacement RIT-T projects

(z6) Where a *RIT-T proponent* is a *declared transmission system operator* within a *declared shared network*, it may in relation to *RIT-T projects* to address an *identified need* that arises from the retirement or de-rating of *network* assets, request assistance and information from *AEMO* as reasonably required for it to consider and conduct market benefits assessments as required by:

(1) clause 5.16.4(b)(6)(iii);

(2) clause 5.16.4(k)(3) to (k)(6); and

(3) clause 5.16.4(v).

(z7) *AEMO* must provide assistance and information requested under paragraph (z6) to the *declared transmission system operator* within a reasonable period of time.

5.20 System security reports

5.20.6 Publication of system strength requirements methodologies

(a) *AEMO* must develop and publish the *system strength requirements methodology* in accordance with the *Rules consultation procedures*.

(b) *AEMO* may amend the *system strength requirements methodology*.

(c) *AEMO* must comply with the *Rules consultation procedures* when making or amending the *system strength requirements methodology*.

(d) *AEMO* may make minor and administrative amendments to the *system strength requirements methodology* without complying with the *Rules consultation procedures*.

(e) The *system strength requirements methodology* determined by *AEMO* must provide for *AEMO* to take the following matters into account in determining the *system strength requirements*~~*fault level nodes* and the minimum *three phase fault level*~~:

(1) the combination of *three phase fault levels* at each *system strength node* ~~*fault level node*~~ in the *region* that could reasonably be considered to be sufficient for the *power system* to be in a *secure operating state*;

(2) the maximum *load shedding* or *generation shedding* expected to occur on the occurrence of any *credible contingency event* or *protected event* affecting the *region*;

(3) the stability of the *region* following any *credible contingency event* or *protected event*;

(4) the risk of *cascading outages* as a result of any *load shedding* or *generating system* or *market network service facility* tripping as a result of a *credible contingency event* or *protected event* in the *region*;

(5) additional contribution to the *three phase fault level* needed to account for the possibility of a reduction in the *three phase fault level* at a *system strength node* ~~*fault level node*~~ if the *contingency event* that occurs is the loss or unavailability of a *synchronous generating unit* or any other *facility* or service that is material in determining the *three phase fault level* at the *system strength node* ~~*fault level node*~~;

(6) the stability of any equipment that is materially contributing to the *three phase fault level* or *inertia* within the *region*; and

(7) any other matters ~~as~~ *AEMO* considers appropriate.

(f) The *system strength requirements methodology* determined by *AEMO* must:

(1) provide an overview of *system strength nodes* and the process to declare them;

(2) describe:

(i) how *AEMO* forecasts new *connections* and the information it takes into account;

(ii) how *AEMO* will determine the assumptions it will use about the size, type and operational profile of *facilities* or classes of *facilities* to be *connected* and their contribution to the matters taken into account in determining the *system strength requirements*; and

(iii) the modelling and analysis methodologies *AEMO* will use to determine *system strength nodes* and minimum *three phase fault levels* at the *system strength nodes* and the matters it will take into account;

(3) provide for *AEMO* to take the following matters into account in determining the *system strength requirements*:

(i) the *Integrated System Plan* and the *Electricity Statement of Opportunities*;

(ii) the matters in paragraphs (e)(1) to (7) for each year of the forecast period; and

(iii) any other matters *AEMO* considers appropriate; and

(4) provide a description of what is meant by stable *voltage* waveforms for the purposes of clause S5.1.14(b)(2) (in addition to that provided in clause S5.1.14(c)) including the matters that may be taken into account by *System Strength Service Providers* to assess, for the level and type of *inverter based resources* projected by *AEMO* at *system strength nodes,* what may be required to achieve stable operation.

5.20.7 Publication of System Strength Report

AEMO must publish annually by 1 December the *System Strength Report* on its website for the following year which must include:

(a) a description of the *system strength requirements* determined by *AEMO* under rule 5.20C since the last *System Strength Report* ~~and details of *AEMO's* assessment of any *fault level shortfall* and *AEMO's* forecast of any *fault level shortfall* arising at any time within a planning of at least 5 years~~;

(b) the *system strength requirements* determined for each *system strength node*~~*region* together with the results of its assessment under clause 5.20C.2~~; ~~and~~

~~(c) information on any other matter that *AEMO* considers relevant.~~

(c) the system strength standard specification (as defined in clause S5.1.14(a)) applicable at each *system strength node* during the 12 months following publication of the *System Strength Report*;

(d) the assumptions used by *AEMO* to determine the *system strength requirements* including assumptions about the size, type and operational profile of *facilities* or classes of *facilities* to be *connected* and their contribution to the matters taken into account in determining the *system strength requirements*;

(e) information about new *system strength nodes* declared since the last *System Strength Report* and an indication of possible future *system strength nodes* and when *AEMO* considers the nodes may be declared; and

(f) information on any other matter that *AEMO* considers relevant.

5.20C System strength requirements

5.20C.1 Declaring system strength requirements

(a) *AEMO* may from time to time declare *system strength nodes*, being locations on the *transmission network* of a *System Strength Service Provider* at which:

(1) in relation to *AEMO*, clauses 4.2.6(g), 4.4.5(a) and 4.6.1(b) apply; and

(2) in relation to a *System Strength Service Provider* for a *system strength node*, clause S5.1.14 applies.

(b) *AEMO* must, by 1 December each year, determine the *system strength requirements* for each *system strength node*. In determining *system strength requirements*, *AEMO* must apply the *system strength requirements methodology*.

(c) The *system strength requirements* to be determined for a *system strength node* are:

(1) the minimum *three phase fault level* for the *system strength node* applicable for the purposes of clauses 4.2.6(g), 4.4.5(a) and 4.6.1(b) for the following year (commencing 2 December); and

(2) *AEMO's* forecast of the following matters for each of the following ten years (commencing 2 December):

(i) the minimum *three phase fault level* applicable at the *system strength node* for the purposes of clause S5.1.14(b)(1); and

(ii) the level and type of *inverter based resources* and *market network service facilities* projected by *AEMO* for the *system strength node* for the purposes of clause S5.1.14(b)(2).

(d) *AEMO* must publish its declaration of *system strength nodes* under paragraph (a) and the *system strength requirements* determined for each *system strength node* in the *System Strength Report*.

(e) If *AEMO* becomes aware of a material change to the *power system* likely to affect the *system strength requirements* for a *system strength node*, where the timing, occurrence or impact of the change was unforeseen, *AEMO* must as soon as reasonably practicable, revise and publish its determination of the

minimum *three phase fault level* under paragraph (c)(1) and the forecast under paragraph (c)(2) for the *system strength node*.

~~5.20C.1 System strength requirements~~

~~(a) *AEMO* must from time to time determine the *system strength requirements* for each *region* applying the *system strength requirements methodology*. *AEMO* must make a determination under this paragraph:~~

~~(1) subject to subparagraph (2) and any other requirements under the *Rules*, for any *region*, no more than once in every 12 month period; and~~

~~(2) for each affected *region*, as soon as reasonably practical after becoming aware of a material change to the *power system* likely to affect the *system strength requirements* for the *region* where the timing, occurrence or impact of the change was unforeseen.~~

~~(b) The *system strength requirements* to be determined for each *region* are:~~

~~(1) the *fault level nodes* in the *region*, being the location on the *transmission network* for which the *three phase fault level* must be maintained at or above a minimum *three phase fault level* determined by *AEMO*; and~~

~~(2) for each *fault level node*, the minimum *three phase fault level*.~~

~~(c) *AEMO* must publish the *system strength requirements* determined for each *region* together with the results of its assessment under clause 5.20C.2 in the *System Strength Report*.~~

5.20C.2 [Deleted]~~Fault level shortfalls~~

~~(a) *AEMO* must as soon as practicable following its determination of the *system strength requirements* for a *region* under clause 5.20C.1 assess:~~

~~(1) the *three phase fault level* typically provided at each *fault level node* in the *region* having regard to typical patterns of *dispatched generation* in *central dispatch*;~~

~~(2) whether in *AEMO's* reasonable opinion, there is or is likely to be a *fault level shortfall* in the *region* and *AEMO's* forecast of the period over which the *fault level shortfall* will exist; and~~

~~(3) where *AEMO* has previously assessed that there was or was likely to be a *fault level shortfall*, whether in *AEMO's* reasonable opinion that *fault level shortfall* has been or will be remedied.~~

~~(b) In making its assessment under paragraph (a) for a *region*, *AEMO* must take into account:~~

~~(1) over what time period and to what extent the *three phase fault levels* at *fault level nodes* that are typically observed in the *region* are likely to be insufficient to maintain the *power system* in a *secure operating state*; and~~

~~(2) any other matters that *AEMO* reasonably considers to be relevant in making its assessment.~~

~~(c) If *AEMO* assesses that there is or is likely to be a *fault level shortfall* in a *region*, *AEMO* must *publish* and give to the *System Strength Service Provider* for the *region* a notice of that assessment that includes *AEMO's* specification of:~~

~~(1) the extent of the *fault level shortfall*; and~~

~~(2) the date by which the *System Strength Service Provider* must ensure the availability of *system strength services* in accordance with clause 5.20C.3(b), which must not be earlier than 12 months after the notice is *published* unless an earlier date is agreed with the *System Strength Service Provider*.~~

~~(d) If *AEMO* assesses that a *fault level shortfall* in a *region* has been or will be remedied, *AEMO* must *publish* and give to the *System Strength Service Provider* for the *region* a notice of that assessment that includes *AEMO's* specification of the date from which the obligation of the *System Strength Service Provider* under clause 5.20C.3(b) ceases, which must not be earlier than 12 months after the notice is *published* unless an earlier date is agreed with the *System Strength Service Provider*.~~

5.20C.3 System Strength Service Provider ~~to make available system strength services~~

(a) The *System Strength Service Provider* for a *region* is:

(1) the *Transmission Network Service Provider* for the *region*; or

(2) if there is more than one *Transmission Network Service Provider* for a *region*~~,~~:

(i) the *jurisdictional planning body* for the *participating jurisdiction* in which the *region* is located, if that entity is also a *Transmission Network Service Provider*; or

(ii) otherwise, the *Co-ordinating Transmission Network Service Provider* for the *region*.

(a1) In this clause, a *non-network option* includes a means by which an *identified need* can be fully or partly addressed by *network* expenditure which is undertaken by a *Network Service Provider* other than the *System Strength Service Provider* or by any other person.

(b) **[Deleted]**~~If *AEMO* gives a notice under clause 5.20C.2(c) that *AEMO* has assessed that there is or is likely to be a *fault level shortfall* at a *fault level node* in a *region*, the *System Strength Service Provider* for the *region* must make *system strength services* available in accordance with paragraph (c) that when *enabled* will address the *fault level shortfall* at the relevant *fault level node*.~~

~~**Note**~~

~~This paragraph is classified as a tier 1 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) **[Deleted]**~~For the purposes of paragraph (b), a *System Strength Service Provider* for a *region* must:~~

~~(1) use reasonable endeavours to make the *system strength services* available by the date specified by *AEMO* in the notice under clause 5.20C.2(c);~~

~~(2) make a range and level of *system strength services* available such that it is reasonably likely that *system strength services* that address the *fault level shortfall* when *enabled* are continuously available, taking into account planned *outages*, the risk of unplanned *outages* and the potential for the *system strength services* to impact typical patterns of *dispatched generation* in *central dispatch*; and~~

~~(3) maintain the availability of those *system strength services* until the date the *System Strength Service Provider's* obligation ceases, as specified by *AEMO* under clause 5.20C.2(d).~~

(d) **[Deleted]** ~~A *System Strength Service Provider* required to make *system strength services* available under paragraph (b) must make available the least cost option or combination of options that will satisfy its obligation within the time referred to in subparagraph (c)(1) and for so long as the obligation to make the *system strength services* available continues.~~

(e) A *System Strength Service Provider* ~~required to make *system strength services* available under paragraph (b)~~ must prepare and *publish* information to enable potential providers of *system strength services* to develop *non-network options* for consideration by the *System Strength Service Provider* including:

(1) a description of the requirement for *system strength services* including timing;

(2) the technical characteristics that a *non-network option* ~~non-network option~~ would be required to deliver, such as the contribution to the *three phase fault level*, location, availability, response time and operating profile;

(3) a summary of potential options to make the *system strength services* available identified by the *System Strength Service Provider*, including *network options* and *non-network options*; and

(4) information to assist providers of *non-network options* wishing to present proposals to the *System Strength Service Provider* including details of how to submit a proposal for consideration.

(f) A *System Strength Service Provider* must provide information in its *Transmission Annual Planning Report* about the *system strength nodes* for which it is the *System Strength Service Provider* including:~~:activities undertaken to satisfy its obligation to make *system strength services* available under paragraph (b).~~

(1) the activities undertaken or planned to satisfy its obligations under clause S5.1.14 in relation to each *system strength node*;

(2) modelling methodologies, assumptions and results used by the *System Strength Service Provider* in planning the activities referred to in subparagraph (1); and

(3) the *System Strength Service Provider's* forecast of the *available fault level* at each *system strength node* over the period for which *AEMO* has

determined *system strength requirements*, where applicable determined in a manner consistent with the methodology in the *system strength impact assessment guidelines*.

(f1) A *System Strength Service Provider* must consult with other *Network Service Providers* whose *networks* are *connected* to the *transmission system* of the *System Strength Service Provider* when preparing the information referred to in paragraph (f).

(g) If the *System Strength Service Provider* proposes *network* investment for the purpose specified in paragraph (f), the *System Strength Service Provider* must provide the following information in its next *Transmission Annual Planning Report*:

(1) the date when the proposed relevant *network* investment became or will become operational;

(2) the purpose of the proposed relevant *network* investment;

(3) the total cost of the proposed relevant *network* investment;

(4) the indicative total costs of any *non-network options* considered.

(h) [**Deleted**.]~~A *System Strength Service Provider* may include the cost of *system strength service payments* in the calculation of *network support payments* in accordance with Chapter 6A.~~

5.20C.4 System strength services information and approvals

(a) A *System Strength Service Provider* who makes *system strength services* available for the purposes of clause S5.1.14~~required to make *system strength services* available under clause 5.20C.3(b)~~ must prepare and give to *AEMO* and keep up to date, a schedule setting out:

(1) the *system strength services* available to contribute to the *three phase fault level* at each *system strength node*~~*fault level node* in the *region* for which there is a *fault level shortfall*~~; and

(2) the *System Strength Service Provider's* proposed order of priority for the *system strength services* to be *enabled*.

(b) Where the *System Strength Service Provider* procures *system strength services* from a *Generator* provided by means of a *generating unit* under a *system strength services agreement*, the *System Strength Service Provider* must register the *generating unit* with *AEMO* as a *system strength generating unit* and specify that the *generating unit* may be periodically used to provide *system strength services* and will not be eligible to set *spot prices* when *constrained on* to provide *system strength services* in accordance with clause 3.9.7(c).

Note

This paragraph is classified as a tier 2 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) A *System Strength Service Provider* ~~required to make *system strength services* available under clause 5.20C.3(b)~~ must give to *AEMO* and keep up to date the

following details for each *system strength service* it makes available to *AEMO* under the *Rules*:

(1) a description of the *system strength service*, including:

(i) the nature of the *system strength service*;

(ii) the *generating unit* or other *facilities* used to provide the *system strength service*;

(iii) the purpose for which the *system strength service* is being provided;

(iv) the location in the *transmission network* or *distribution network* of the *facilities* used to provide the *system strength service*;

(v) the contribution to the *three phase fault level* at each relevant *system strength node* ~~*fault level node*~~ and the *facility's connection point* when the *system strength service* is *enabled*; and

(vi) any other information (including models) requested by *AEMO* to assess the contribution of the *system strength service* referred to in subparagraph (v).

(2) information about the availability of the *system strength service*, including:

(i) the times when, and the period over which, the *system strength service* will be available to contribute to the *three phase fault level* at each relevant *system strength node*~~*fault level node*~~; and

(ii) any possible restrictions on the availability of the *system strength service*.

(d) A *System Strength Service Provider* ~~required to make *system strength services* available under clause 5.20C.3(b)~~ must prepare and submit to *AEMO* ~~for approval under paragraph (e)~~ the following details for each *system strength service* it makes available to *AEMO* under the *Rules*:

(1) the technical specification and performance standards for the *system strength service*; and

(2) the arrangements necessary for *AEMO* to give instructions to *enable* or cease the provision of the *system strength service* including:

(i) the period of any notice that has to be given to the provider of the *system strength service* for it to be *enabled*;

(ii) the response time to any instruction for the *system strength service* to be *enabled* or to cease being provided; and

(iii) communication protocols between it, *AEMO* and the *Registered Participants* or other persons that provide *system strength services*.

(e) The ~~technical specification, performance standards and~~ arrangements necessary for *AEMO* to give the instructions referred to in paragraph (d) and any change to them must be consistent with the *Rules* and approved by *AEMO*.

(f) A *System Strength Service Provider* must ensure that *AEMO*'s approval is obtained under paragraph (e) before the *system strength service* is first made available and in the case of a change, before the change comes into effect.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(g) *AEMO* must use reasonable endeavours to respond to the *System Strength Service Provider* within 20 *business days* following the receipt of a request for approval under paragraph (e) stating whether it gives its approval.

(h) If *AEMO* does not approve the matters in a request for approval under paragraph (e):

(1) *AEMO* must tell the *System Strength Service Provider* its reasons for withholding approval and may advise the *System Strength Service Provider* of the changes *AEMO* requires to be made; and

(2) the *System Strength Service Provider* must amend its request to address the matters identified by *AEMO* and submit to *AEMO* a new request for approval.

Schedule 5.1a System standards

S5.1a.9 Minimum three phase fault levels and stability for system strength

(a) The *power system* should have minimum *three phase fault levels* sufficient to enable:

(1) the *protection systems* of *transmission networks*, *distribution networks*, *Transmission Network Users* and *Distribution Network Users* to operate correctly;

(2) *voltage control systems* (such as reactive bank switching and dynamic *voltage* control) to be stable; and

(3) the *power system* to remain stable following any *credible contingency event* or *protected event*.

(b) There should be stable *voltage* waveforms at *connection points* in the *power system* such that:

(1) in steady state conditions, *plant* does not create, amplify or reflect instabilities; and

(2) avoiding *voltage* waveform instability following any *credible contingency event* or *protected event* is not dependent on *plant disconnecting* from the *power system* or varying *active power* or *reactive power* transfer at *connection points* except in accordance with applicable *performance standards*.

Schedule 5.1 Network Performance Requirements to be Provided or Co-ordinated by Network Service Providers

S5.1.1 Introduction

This schedule describes the planning, design and operating criteria that must be applied by *Network Service Providers* to the *transmission networks* and *distribution networks* which they own, operate or control. It also describes the requirements on *Network Service Providers* to institute consistent processes to determine the appropriate technical requirements to apply for each *connection* enquiry or *application to connect* processed by the *Network Service Provider* with the objective that all *connections* satisfy the requirements of this schedule.

Together, these are the *power system* performance and quality of *supply* standards that *Network Service Providers* must comply with in accordance with clause 5.2.3(b).

The criteria and the obligations of *Registered Participants* to implement them, fall into two categories, namely:

(a) those required to achieve adequate levels of *network power transfer capability* or quality of *supply* for the common good of all, or a significant number of, *Registered Participants*; and

(b) those required to achieve a specific level of *network service* at an individual *connection point*.

A *Network Service Provider* must:

(1) fully describe the quantity and quality of *network services* which it agrees to provide to a person under a *connection agreement* in terms that apply to the *connection point* as well as to the *transmission system* or *distribution system* as a whole;

(2) ensure that the quantity and quality of those *network services* are not less than could be provided to the relevant person if the *national grid* were planned, designed and operated in accordance with the criteria set out in this clause S5.1.1 and recognising that levels of service will vary depending on location of the *connection point* in the *network*; and

(3) observe and apply the relevant provisions of the *system standards* in accordance with this schedule 5.1.

To the extent that this schedule 5.1 does not contain criteria which are relevant to the description of a particular *network service*, the *Network Service Provider* must describe the *network service* in terms which are fair and reasonable.

This schedule includes provisions for *Network Service Providers* and *Registered Participants* to negotiate the criteria to apply to a *connection* within defined ranges between a lower bound (*minimum access standard*) and an upper bound (*automatic access standard*). All criteria which are intended to apply to a *connection* must be recorded in a *connection agreement*. Where it is intended to apply a *negotiated access standard* in accordance with clause 5.3.4A of the *Rules*, the *Network Service Provider* must first be satisfied that the application of the *negotiated access standard* will not adversely affect other *Registered Participants*.

S5.1.14 Minimum three phase fault levels and stability for system strength nodes

(a) In this clause:

relevant year means each period of 12 months commencing 2 December.

system strength standard specification means, for a *system strength node* at any time in a relevant year, the forecast system strength requirements for the *system strength node* determined for the relevant year three years prior (that is, in the *system strength requirements* due to be determined by 1 December falling three years before the relevant year commenced and disregarding any revision under clause 5.20C.1(e)).

Examples

If the relevant year is 2 December 2026 to 1 December2027, the system strength standard specification on each day during that year will be the forecast made in the determination of the *system strength requirements* due to be made by 1 December 2023.

If a new *system strength node* is declared on 1 December 2028, there will be no system strength standard specification for that *system strength node* for the relevant years commencing 2 December 2028, 2 December 2029 and 2 December 2030. During those relevant years the *Transmission Network Service Provider* will nonetheless have obligations under paragraph (b) to plan, design etc its *network* to meet the standard for the relevant year commencing 2 December 2031.

forecast system strength requirements means, for a *system strength node* for a relevant year, *AEMO's* forecast under clause 5.20C.1(c) of:

(i) the minimum *three phase fault level* applicable at the *system strength node*; and

(ii) the level and type of *inverter based resources* and *market network service facilities* projected by *AEMO* for the *system strength node*.

(b) A *Transmission Network Service Provider* who is a *System Strength Service Provider* must use reasonable endeavours to plan, design, maintain and operate its *transmission network*, or make *system strength services* available to *AEMO*, to meet the following requirements at *system strength nodes* on its *transmission network* in each relevant year:

(1) maintain the *minimum three phase fault level* specified by *AEMO* for the *system strength node* in the system strength standard specification for the relevant year; and

(2) achieve stable *voltage* waveforms for the level and type of *inverter based resources* and *market network service facilities* projected by *AEMO* in the system strength standard specification for the *system strength node* for the relevant year:

(i) in steady state conditions,; and

(ii) following any *credible contingency event* described in clause S5.1.2.1 or any *protected event*.

(c) For paragraph (b)(2), *voltage* waveforms must be sufficiently stable such that:

(1) in steady state conditions, *inverter based resources* and *market network service facilities* do not create, amplify or reflect instabilities;

(2) avoiding *voltage* waveform instability following any *credible*

contingency event described in clause S5.1.2.1 or any *protected event* is not dependent on any of the *inverter based resources* or *market network service facilities disconnecting* from the *power system* or significantly varying the *active power* or *reactive power* transfer at the *connection point* except in accordance with applicable *performance standards*; and

(3) the description of what is meant by stable *voltage* waveforms in the *system strength requirements methodology* is satisfied.

Schedule 5.2 Conditions for Connection of Generators

S5.2.5 Technical requirements

S5.2.5.5 Generating system response to disturbances following contingency events

(a) In this clause S5.2.5.5 a fault includes a fault of the relevant type having a metallic conducting path.

Automatic access standard

(b) The *automatic access standard* is:

(1) for a *generating system* and each of its *generating units*, the requirements of paragraphs (c) and (d);

(2) for a *generating system* comprised solely of *synchronous generating units*, the requirements of paragraph (e);

(3) for a *generating system* comprised solely of *asynchronous generating units*, the requirements of paragraphs (f) to (i); and

(4) for a *generating system* comprised of *synchronous generating units* and *asynchronous generating units*:

(i) for that part of the *generating system* comprised of *synchronous generating units*, the requirements of paragraph (e); and

(ii) for that part of the *generating system* comprised of *asynchronous generating units*, the requirements of paragraphs (f) to (i).

All generating systems

(c) A *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for any disturbance caused by:

(1) a *credible contingency event*;

(2) a three phase fault in a *transmission system* cleared by all relevant primary *protection systems*;

(3) a two phase to ground, phase to phase or phase to ground fault in a *transmission system* cleared in:

(i) the longest time expected to be taken for a relevant *breaker fail protection system* to clear the fault; or

(ii) if a *protection system* referred to in subparagraph (i) is not installed, the greater of the time specified in column 4 of Table

S5.1a.2 (or if none is specified, 430 milliseconds) and the longest time expected to be taken for all relevant primary *protection systems* to clear the fault; or

(4) a three phase, two phase to ground, phase to phase or phase to ground fault in a *distribution network* cleared in:

(i) the longest time expected to be taken for the *breaker fail protection system* to clear the fault; or

(ii) if a *protection system* referred to in subparagraph (i) is not installed, the greater of 430 milliseconds and the longest time expected to be taken for all relevant primary *protection systems* to clear the fault,

provided that the event is not one that would *disconnect* the *generating unit* from the *power system* by removing *network elements* from service.

(d) A *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for a series of up to 15 disturbances within any five minute period caused by any combination of the events described in paragraph (c) where:

(1) up to six of the disturbances cause the *voltage* at the *connection point* to drop below 50% of *normal voltage*;

(2) in parts of the *network* where three-phase automatic reclosure is permitted, up to two of the disturbances are three phase faults, and otherwise, up to one three phase fault where *voltage* at the *connection point* drops below 50% of *normal voltage*;

(3) up to one disturbance is cleared by a *breaker fail protection system* or similar back-up *protection system*;

(4) up to one disturbance causes the *voltage* at the *connection point* to vary within the ranges under clause S5.2.5.4(a)(7) and (a)(8);

(5) the minimum clearance from the end of one disturbance and commencement of the next disturbance may be zero milliseconds; and

(6) all remaining disturbances are caused by faults other than three phase faults,

provided that none of the events would result in:

(7) the islanding of the *generating system* or cause a material reduction in *power transfer capability* by removing *network elements* from service;

(8) the cumulative time that *voltage* at the *connection point* is lower than 90% of *normal voltage* exceeding 1,800 milliseconds within any five minute period; or

(9) the time integral, within any five minute period, of the difference between 90% of *normal voltage* and the *voltage* at the *connection point* when the *voltage* at the *connection point* is lower than 90% of *normal voltage* exceeding 1 pu second.

Synchronous generating systems

(e) Subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control, a *generating system* comprised of *synchronous generating units*, in respect of the types of fault described in subparagraphs (c)(2) to (4), must supply to or absorb from the *network*:

(1) to assist the maintenance of *power system voltages* during the fault, capacitive reactive current of at least the greater of its pre-disturbance reactive current and 4% of the maximum continuous current of the *generating system* including all operating *synchronous generating units* (in the absence of a disturbance) for each 1% reduction (from the level existing just prior to the fault) of *connection point voltage* during the fault;

(2) after clearance of the fault, *reactive power* sufficient to ensure that the *connection point voltage* is within the range for *continuous uninterrupted operation* under clause S5.2.5.4; and

(3) from 100 milliseconds after clearance of the fault, *active power* of at least 95% of the level existing just prior to the fault.

Asynchronous generating systems

(f) Subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control, a *generating system* comprised of *asynchronous generating units*, in respect of the types of fault described in subparagraphs (c)(2) to (4), must have *facilities* capable of supplying to or absorbing from the *network*:

(1) to assist the maintenance of *power system voltages* during the fault:

(i) capacitive reactive current in addition to its pre-disturbance level of at least 4% of the maximum continuous current of the *generating system* including all operating *asynchronous generating units* (in the absence of a disturbance) for each 1% reduction of *voltage* at the *connection point* below the relevant range in which a reactive current response must commence, as identified in subparagraph (g)(1), with the *performance standards* to record the required response agreed with *AEMO* and the *Network Service Provider*; and

(ii) inductive reactive current in addition to its pre-disturbance level of at least 6% of the maximum continuous current of the *generating system* including all operating *asynchronous generating units* (in the absence of a disturbance) for each 1% increase of *voltage* at the *connection point* above the relevant range in which a reactive current response must commence, as identified in subparagraph (g)(1), with the *performance standards* to record the required response agreed with *AEMO* and the *Network Service Provider*,

during the disturbance and maintained until *connection point voltage* recovers to between 90% and 110% of *normal voltage*, or such other range agreed with the *Network Service Provider* and

AEMO, except for *voltages* below the relevant threshold identified in paragraph (h); and

(2) from 100 milliseconds after clearance of the fault, *active power* of at least 95% of the level existing just prior to the fault.

(g) For the purpose of paragraph (f):

(1) the *generating system* must commence a response when the *voltage* is in an under-voltage range of 85% to 90% or an over-voltage range of 110% to 115% of *normal voltage*. These ranges may be varied with the agreement of the *Network Service Provider* and *AEMO* (provided the magnitude of the range between the upper and lower bounds remains at Δ5%); and

(2) the reactive current response must have a *rise time* of no greater than 40 milliseconds and a *settling time* of no greater than 70 milliseconds and must be *adequately damped*.

(h) Despite paragraph (f), a *generating system* is not required to provide a capacitive reactive current response in accordance with subparagraph (f)(1)(i) where:

(1) the *generating system* is directly *connected* to the *power system* with no step-up or *connection transformer*; and

(2) *voltage* at the *connection point* is 5% or lower of *normal voltage*.

(i) Subject to paragraph (h), despite the amount of reactive current injected or absorbed during *voltage* disturbances, and subject to thermal limitations and energy source availability, a *generating system* must make available at all times:

(1) sufficient current to maintain rated apparent power of the *generating system* including all operating *generating units* (in the absence of a disturbance), for all *connection point voltages* above 115% (or otherwise, above the over-voltage range agreed in accordance with subparagraph (g)(1)); and

(2) the maximum continuous current of the *generating system* including all operating *generating units* (in the absence of a disturbance) for all *connection point voltages* below 85% (or otherwise, below the under-voltage range agreed in accordance with subparagraph (g)(1)),

except that *AEMO* and the *Network Service Provider* may agree limits on active current injection where required to maintain *power system security* and/or the quality of *supply* to other *Network Users*.

Minimum access standard

(j) The *minimum access standard* is:

(1) for a *generating system* and each of its *generating units*, the requirements of paragraphs (k) and (l);

(2) for a *generating system* comprised solely of *synchronous generating units*, the requirements of paragraph (m);

(3) for a *generating system* comprised solely of *asynchronous generating units*, the requirements of paragraphs (n) to (p); and

(4) for a *generating system* comprised of *synchronous generating units* and *asynchronous generating units*:

(i) for that part of the *generating system* comprised of *synchronous generating units*, the requirements of paragraph (m); and

(ii) for that part of the *generating system* comprised of *asynchronous generating units*, the requirements of paragraphs (n) to (p).

All generating systems

(k) A *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for any disturbance caused by:

(1) a *credible contingency event*; or

(2) a single phase to ground, phase to phase or two phase to ground fault in a *transmission system* or *distribution network* cleared in the longest time expected to be taken for all relevant primary *protection systems* to clear the fault, unless *AEMO* and the *Network Service Provider* agree that the total reduction of *generation* in the *power system* due to that fault would not exceed 100 MW, or a greater limit based on what *AEMO* and the *Network Service Provider* both consider to be reasonable in the circumstances,

provided that the event is not one that would *disconnect* the *generating unit* from the *power system* by removing *network elements* from service.

(l) A *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for a series of up to six disturbances within any five minute period caused by any combination of the events described in paragraph (k) where:

(1) up to three of the disturbances cause the *voltage* at the *connection point* to drop below 50% of *normal voltage*;

(2) up to one disturbance causes the *voltage* at the *connection point* to vary within the ranges agreed by *AEMO* and the *Network Service Provider* under clause S5.2.5.4(a)(7), (a)(8), (b)(4) or (b)(5) (as appropriate);

(3) the time difference between the clearance of one disturbance and commencement of the next disturbance exceeds 200 milliseconds;

(4) no more than three of the disturbances occur within 30 seconds; and

(5) all disturbances are caused by faults other than three phase faults,

provided that none of the events would result in:

(6) the islanding of the *generating system* or cause a material reduction in *power transfer capability* by removing *network elements* from service;

(7) the cumulative time that *voltage* at the *connection point* is lower than 90% of *normal voltage* exceeding 1,000 milliseconds within any five minute period; or

(8) the time integral, within any five minute period, of the difference between 90% of *normal voltage* and the *voltage* at the *connection point* when the *voltage* at the *connection point* is lower than 90% of *normal voltage* exceeding 0.5 pu second,

and there is a minimum of 30 minutes where no disturbances occur following a five minute period of multiple disturbances.

Synchronous generating systems

(m) Subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control after clearance of the fault, a *generating system* comprised of *synchronous generating units*, in respect of the types of fault described in subparagraph (k)(2) must:

(1) deliver *active power* to the *network*, and supply or absorb leading or lagging *reactive power*, sufficient to ensure that the *connection point voltage* is within the range for *continuous uninterrupted operation* agreed under clause S5.2.5.4; and

(2) return to at least 95% of the pre-fault *active power* output, after clearance of the fault, within a period of time agreed by the *Connection Applicant*, *AEMO* and the *Network Service Provider*.

Asynchronous generating systems

(n) Subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control, a *generating system* comprised of *asynchronous generating units* must:

(1) for the types of fault described in subparagraph (k)(2), and to assist the maintenance of *power system voltages* during the fault, have *facilities* capable of supplying to or absorbing from the *network*:

(i) capacitive reactive current in addition to its pre-disturbance level of at least 2% of the maximum continuous current of the *generating system* including all operating *asynchronous generating units* (in the absence of a disturbance) for each 1% reduction of *voltage* at the *connection point* below the relevant range in which a reactive current response must commence, as identified in paragraph (o)(1), with the *performance standards* to record the required response agreed with *AEMO* and the *Network Service Provider*; and

(ii) inductive reactive current in addition to its pre-disturbance level of at least 2% of the maximum continuous current of the *generating system* including all operating *asynchronous generating units* (in the absence of a disturbance) for each 1% increase of *voltage* at the *connection point* above the relevant range in which a reactive current response must commence, as identified in paragraph (o)(1), with the *performance standards* to record the required response agreed with *AEMO* and the *Network Service Provider*,

during the disturbance and maintained until *connection point voltage* recovers to between 90% and 110% of *normal voltage*, or such other

range agreed with the *Network Service Provider* and *AEMO*, except for *voltages* below the relevant threshold identified in paragraph (p); and

(2) return to at least 95% of the pre-fault *active power* output, after clearance of the fault, within a period of time agreed by the *Connection Applicant*, *AEMO* and the *Network Service Provider*.

(o) For the purpose of paragraph (n):

(1) the *generating system* must commence a response when the *voltage* is in an under-voltage range of 80% to 90% or an over-voltage range of 110% to 120% of *normal voltage*. These ranges may be varied with the agreement of the *Network Service Provider* and *AEMO* (provided the magnitude of the range between the upper and lower bounds remains at Δ10%);

(2) where *AEMO* and the *Network Service Provider* require the *generating system* to sustain a response duration of 2 seconds or less, the reactive current response must have a *rise time* of no greater than 40 milliseconds and a *settling time* of no greater than 70 milliseconds and must be *adequately damped*; and

(3) where *AEMO* and the *Network Service Provider* require the generating system to sustain a response duration of greater than 2 seconds, the reactive current *rise time* and *settling time* must be as soon as practicable and must be *adequately damped*.

(p) Despite paragraph (n), a *generating system* is not required to provide a capacitive reactive current response in accordance with subparagraph (n)(1)(i) where:

(1) *voltage* at the *connection point* is 15% or lower of *normal voltage*; or

(2) where the *generating system* is directly *connected* to the *power system* with no step-up or *connection transformer*, *voltage* at the *connection point* is 20% or lower of *normal voltage*.

Negotiated access standard

(q) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.5.5, the *Network Service Provider* and *AEMO* must take into account, without limitation:

(1) the expected performance of:

(i) existing *networks* and *considered projects*;

(ii) existing *generating plant* and other relevant projects; and

(iii) *control systems* and *protection systems*, including auxiliary systems and *automatic reclose equipment*; and

(2) the expected range of *power system* operating conditions.

(r) A proposed *negotiated access standard* may be accepted if the *connection* of the *plant* at the proposed access level would not cause other *generating plant* or *loads* to trip as a result of an event, when they would otherwise not have tripped for the same event.

(r1) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.5.5 where the *Connection Applicant* has elected in accordance with clause 5.3.4B(b1) to pay the *system strength charge* in relation to the *connection*, the *Network Service Provider* and *AEMO* must take into account the performance required to be provided by the *System Strength Service Provider* at the relevant *system strength node* in accordance with clause S5.1.14.

General requirement

All generating systems

(s) The *performance standard* must include any operational arrangements to ensure the *generating system* including all operating *generating units* will meet its agreed performance levels under abnormal *network* or *generating system* conditions.

(t) When assessing multiple disturbances, a fault that is re-established following operation of *automatic reclose equipment* shall be counted as a separate disturbance.

Asynchronous generating systems

(u) For the purpose of paragraphs (f) and (n):

(1) the reactive current contribution may be limited to the maximum continuous current of a *generating system*, including its operating *asynchronous generating units*;

(2) the reactive current contribution and *voltage* deviation described may be measured at a location other than the *connection point* (including within the relevant *generating system*) where agreed with *AEMO* and the *Network Service Provider*, in which case the level of injection and absorption will be assessed at that agreed location;

(3) the reactive current contribution required may be calculated using phase to phase, phase to ground or sequence components of *voltages*. The ratio of the negative sequence to positive sequence components of the reactive current contribution must be agreed with *AEMO* and the *Network Service Provider* for the types of disturbances listed in this clause S5.2.5.5; and

(4) the *performance standards* must record all conditions (which may include temperature) considered relevant by *AEMO* and the *Network Service Provider* under which the reactive current response is required.

Synchronous generating systems and units

(v) For a *generating system* comprised solely of *synchronous generating units*, the reactive current contribution may be limited to 250% of the maximum continuous current of the *generating system*.

(w) For a *synchronous generating unit* within a *generating system* (other than a *generating system* described in paragraph (v)), the reactive current contribution may be limited to 250% of the maximum continuous current of that *synchronous generating unit*.

S5.2.5.15 Short circuit ratio

(a) This clause S5.2.5.15:

(1) applies to a *generating system* comprised solely of *asynchronous generating units*;

(2) does not apply to a *generating system* comprised solely of *synchronous generating units*; and

(3) for a *generating system* comprised of both *synchronous generating units* and *asynchronous generating units*, applies only to the *asynchronous generating units* and to the *generating system* to the extent it relates to its *asynchronous generating units*.

Minimum access standard

(b) The *minimum access standard* is a *generating system* comprised of *asynchronous generating units* must have *plant* capability sufficient to operate stably and remain *connected* at a *short circuit ratio* of 3.0, assessed in accordance with the methodology prescribed in the *system strength impact assessment guidelines*.

General requirements

(c) The *performance standards* in the *connection agreement* must record:

(1) the agreed value of the *short circuit ratio* which must be the minimum of 3.0 and the value at which the *generating system* has *plant* capability sufficient to operate stably and remain *connected*;

(2) the *rated active power* used to calculate the value of the *short circuit ratio*; and

(3) any arrangements agreed under paragraph (e).

(d) The plant capability referred to in paragraph (c)(1) may be demonstrated with any appropriate *control system* and/or *protection system* settings. The settings used may be different to the setting required for compliance with other *performance standards* established under this clause S5.2.5.

(e) If the *generating system* is not capable of meeting the *minimum access standard*, the *Generator* may, if agreed by *AEMO*, the *Network Service Provider* and the *System Strength Service Provider*, achieve compliance by demonstrating it has:

(1) in accordance with paragraph (f), legally binding commitments to make additional investment in its *plant* or for the supply to it of services to remedy, at its cost, the shortfall in capability, either on *connection* or in agreed circumstances (such as the occurrence of an event that results in a change to the *three phase fault level* at the *connection point*); together with

(2) operational arrangements agreed with the *Network Service Provider* that apply when the investment or services referred to in subparagraph (1) have not yet been made or are not available.

(f) For paragraph (e)(1), the *Generator* may:

(1) reach agreement with the *Network Service Provider* for the *Generator* to undertake investment in its *plant* to achieve *plant* capability sufficient to operate stably and remain *connected* at a *short circuit ratio* of 3.0; or

(2) procure from the *Network Service Provider*, the *System Strength Service Provider* or another *Registered Participant*, services to enable the *generating system* to operate stably and remain *connected* at a *short circuit ratio* of 3.0 but calculated using a *three phase fault level* at the *connection point* that excludes any contribution from the facilities providing the service.

S5.2.5.16 Voltage phase angle shift

(a) This clause S5.2.5.16:

(1) applies to a *generating system* comprised solely of *asynchronous generating units*;

(2) does not apply to a *generating system* comprised solely of *synchronous generating units*; and

(3) for a *generating system* comprised of both *synchronous generating units* and *asynchronous generating units*, applies only to the *asynchronous generating units* and to the *generating system* to the extent it relates to its *asynchronous generating units*.

Minimum access standard

(b) The *minimum access standard* is a *generating system* and each of its *asynchronous generating units* must not include any vector shift or similar relay or protective function that acts upon *voltage* phase angle which might operate for phase angle changes less than 20 degrees at the *connection point*.

General requirements

(c) The agreed value of the settings of any *protection system* must be recorded in the *performance standards*.

Schedule 5.3 Conditions for Connection of Customers

S5.3.1a Introduction to the schedule

(a) This schedule applies to the following classes of *Network User*:

(1) a *First-Tier Customer* in respect of its *first-tier load*;

(2) a *Second-Tier Customer* in respect of its *second-tier load*;

(3) a *Market Customer* in respect of its *market load*;

(4) a *Non-Registered Customer* in respect of its *connection* to ~~*supply* it takes from~~ a *network*; and

(5) a *Distribution Network Service Provider* in respect of its *distribution network*.

(b) For the purposes of this schedule 5.3 the term ***Network Service Provider*** must be interpreted to mean the *Network Service Provider* with whom the

Connection Applicant has sought, or is seeking, a *connection* in accordance with clause 5.3.2 of the *Rules*.

(c) All *Network Users* must comply with the requirements for the establishment of *performance standards* in accordance with provisions contained in schedule 5.1a for *system standards* or schedule 5.1 for *Network Service Providers* and this schedule 5.3 for *Customers*.

(d) If the *Connection Applicant* is a *Registered Participant* in relation to the proposed *connection*, the *Network Service Provider* may include as terms and conditions of the *connection agreement* any provision of this schedule that is expressed as an obligation on a *Network User*. If the *Connection Applicant* is not a *Registered Participant* in relation to the proposed *connection*, the *Network Service Provider* must include as terms and conditions of the *connection agreement*:

(1) each provision of this schedule that is expressed as an obligation on a *Network User*; and

(2) each agreed *performance standard* and an obligation to comply with it.

(e) The purpose of this schedule is to:

(1) describe the information that must be exchanged for the *connection* enquiry and *application to connect* processes described in rule 5.3 of the *Rules*;

(2) establish the *automatic access standards* and *minimum access standards* that will apply to the process of negotiating access standards under clause 5.3.4A of the *Rules*; and

(3) establish obligations to apply prudent design standards for the *plant* to be *connected*.

S5.3.1 Information

(a) Before a *Network User connects* any new or additional equipment to a *network*, the *Network User* must submit the following kinds of information to the *Network Service Provider*:

(1) a single line diagram with the protection details;

(2) *metering system* design details for any metering equipment being provided by the *Network User*;

(3) a general arrangement locating all the equipment on the site;

(4) a general arrangement for each new or altered *substation* showing all exits and the position of all electrical equipment;

(5) type test certificates for all new switchgear and *transformers*, including measurement *transformers* to be used for metering purposes in accordance with Chapter 7 of the *Rules*;

(6) earthing details;

(7) the proposed methods of earthing cables and other equipment to comply with the regulations of the relevant *participating jurisdiction*;

(8) *plant* and earth grid test certificates from approved test authorities;

(9) a secondary injection and trip test certificate on all circuit breakers;

(10) certification that all new equipment has been inspected before being *connected* to the *supply*; and

(11) operational arrangements.

(a1) Before a *Network User connects* any new or additional equipment to a *network* or if earlier, in accordance with the requirements of this Chapter, the *Network User* must submit:

(1) to *AEMO* and the relevant *Network Service Provider*(s), information about the *protection systems* of the equipment;

(2) to *AEMO* and the relevant *Network Service Provider*(s), information about the *control systems* of the equipment including:

(i) a set of functional block diagrams, including all functions between feedback signals and output;

(ii) the parameters of each functional block, including all settings, gains, time constants, delays, deadbands and limits;

(iii) the characteristics of non-linear elements;

(iv) encrypted models in a form suitable for the software simulation products nominated by *AEMO* in the *Power System Model Guidelines*;

(3) to *AEMO* and the relevant *Network Service Provider*(s), any other information specified in the *Power System Model Guidelines*, *Power System Design Data Sheet* and *Power System Setting Data Sheet*;

(4) to *AEMO*, model source code (in the circumstances required by the *Power System Model Guidelines*) associated with the model in subparagraph (2)(iv) in an unencrypted form suitable for at least one of the software simulation products nominated by *AEMO* in the *Power System Model Guidelines* and in a form that would allow conversion for use with other software simulation products nominated by *AEMO* in the *Power System Model Guidelines*.

Note

This paragraph is classified as a tier 2 civil penalty provision under the National Electricity (South Australia) Regulations. (See clause 6(1) and Schedule 1 of the National Electricity (South Australia) Regulations.)

(a2) The information provided under paragraph (a1) must contain sufficient detail for *AEMO* and the relevant *Network Service Provider*(s) to perform *power system* simulation studies in accordance with the requirements and circumstances specified in the *Power System Model Guidelines*.

(a3) Notwithstanding paragraph (a1), *AEMO* may exempt a *Network User* or class of *Network Users* from the requirement to provide some or all of the information specified in paragraph (a1), and must do so in accordance with the circumstances set out in the *Power System Model Guidelines*.

(a4) All information provided to *AEMO* and the relevant *Network Service Provider*(s) under paragraph (a1) or pursuant to paragraph (a3) must be treated as *confidential information* by those recipients.

(b) For the purposes of clause 5.3.2(f) of the *Rules*, the technical information that a *Network Service Provider* must, if requested, provide to a *Connection Applicant* in respect of the proposed *connection* includes:

(1) the highest expected single phase and three phase fault levels at the *connection point* without the proposed *connection*;

(2) the clearing times of the existing *protection systems* that would clear a fault at the location at which the new *connection* would be connected into the existing *transmission system* or *distribution system*;

(3) the expected limits of *voltage* fluctuation, harmonic *voltage* distortion and *voltage* unbalance at the *connection point* without the proposed *connection*;

(4) technical information relevant to the *connection point* without the proposed *connection* including equivalent source impedance information, sufficient to estimate fault levels, *voltage* fluctuations, harmonic *voltage* distortion and *voltage* unbalance; and

(5) any other information or data not being *confidential information* relating to the performance of the *Network Service Provider's facilities* that is reasonably necessary for the *Connection Applicant* to prepare an *application to connect*;

except where the *Connection Applicant* agrees the *Network Service Provider* may provide alternative or less detailed technical information in satisfaction of this clause S5.3.1.(b).

S5.3.11 Short circuit ratio (customers)

(a) This clause S5.3.11 applies to a *Network User* where the *plant* to be *connected* includes any *inverter based resource*.

Minimum access standard

(b) The *minimum access standard* is electrical *plant* must have *plant* capability sufficient to operate stably and remain *connected* at a *short circuit ratio* of 3.0, assessed in accordance with the methodology prescribed in the *system strength impact assessment guidelines*.

General requirements

(c) The *performance standards* in the *connection agreement* must record:

(1) the agreed value of the *short circuit ratio* which must be the minimum of 3.0 and the value at which the *plant* has *plant* capability sufficient to operate stably and remain *connected*; and

(2) the *maximum demand* used to calculate the agreed value.

(d) For paragraphs (b) and (c), the *plant* capability may be demonstrated with any appropriate *control system* and/or *protection system* settings. The settings used may be different to the setting required for compliance with other *performance standards* established under this schedule.

Schedule 5.3a Conditions for connection of Market Network Services

S5.3a.7 Short circuit ratio

(a) This clause S5.3a.7 applies to all *Market Network Service Providers* specified in clause S5.3a.1a.

Minimum access standard

(b) The *minimum access standard* is an installation comprised of electrical *plant* must have *plant* capability sufficient to operate stably and remain *connected* at a *short circuit ratio* of 3.0, assessed in accordance with the methodology prescribed in the *system strength impact assessment guidelines*.

General requirements

(c) The *performance standards* in the *connection agreement* must record:

(1) the agreed value of the *short circuit ratio* which must be the minimum of 3.0 and the value at which the *plant* has *plant* capability sufficient to operate stably and remain *connected*; and

(2) the rated *power transfer capability* used to calculate the value.

(d) For paragraphs (b) and (c), the *plant* capability may be demonstrated with any appropriate *control system* and/or *protection system* settings. The settings used may be different to the setting required for compliance with other *performance standards* established under this schedule.

Schedule 5.4A Preliminary Response

For the purposes of clause 5.3A.7(a), the following information must be included in the preliminary response:

(a) relevant technical information about the *Distribution Network Service Provider's distribution network*, including guidance on how the *Connection Applicant* may meet the following requirements if it were to proceed to prepare an *application to connect*:

(1) primary protection and backup protection;

(2) other protection and control requirements applicable to *embedded generating units* and associated *plant*;

(3) *remote monitoring equipment* and control communications *facilities*;

(4) insulation co-ordination and lightning protection;

(5) existing maximum and minimum fault levels and *fault clearance times* of relevant local *zone substations*";

(6) switching and *isolation* facilities;

(7) interlocking and *synchronising* arrangements;

(8) *metering installations*; and

(9) remedy or avoid a *general system strength impact*~~an *adverse system strength impact*~~ caused by the *connection*;

(b) if not otherwise provided in accordance with paragraph (a), to the extent the *Distribution Network Service Provider* holds technical information necessary to prepare an *application to connect*, that information;

(c) information relevant to each technical requirement of the proposed *plant* as relevant to:

(1) the *automatic access standards*;

(2) any relevant *minimum access standards*;

(3) any applicable *plant standards*; and

(4) the *normal voltage* level, if it is expected to change from the *nominal voltage* level;

(d) the identity of other parties that the *Distribution Network Service Provider* considers:

(1) will need to be involved in planning to make the *connection* or must be involved under clause 5.3A.10(c); and

(2) must be paid for *transmission services* or *distribution services*;

(e) whether it will be necessary for any of the parties identified in subparagraph (d) to enter into an agreement with the *Connection Applicant* in respect of the provision of *connection services* or other *transmission services* or *distribution services* or both, to the *Connection Applicant*;

(f) where relevant the *Distribution Network Service Provider* is to identify whether any service required to *establish a connection* is *contestable* in the relevant *participating jurisdiction*;

(g) worked examples of *connection service* charges relevant to the enquiry and an explanation of the factors on which the charges depend;

(h) information regarding the *Distribution Network Service Provider* and its *network*, system limitations for *sub-transmission lines* and *zone substations* and other information relevant to constraints on the *network* as such information is relevant to the *application to connect*;

(i) an indication of whether *network augmentation* may be required and if required, what work the *network augmentation* may involve;

(i1) an indication of whether the new *connection* is expected in the reasonable opinion of a *Network Service Provider* to have a *general system strength impact* and whether a *system strength locational factor* can be calculated in relation to the new *connection*~~*an adverse system strength impact*~~;

(j) a hyperlink to the *Distribution Network Service Provider's information pack*;

(k) the contact details for the relevant point of contact within the *Distribution Network Service Provider* managing the *connection* enquiry;

(l) the *Distribution Network Service Provider's* response to the objectives of the *connection* sought as included by the *Connection Applicant* in its enquiry under clause 5.3A.5(c)(1);

(m) a description of the process for the provision of the *detailed response*, including the further information to be provided by the *Connection Applicant*

and analysis to be undertaken by the *Distribution Network Service Provider* as part of the preparation of the *detailed response*;

(n) an overview of any available options for *connection* to the *Distribution Network Service Provider's network*, as relevant to an enquiry lodged, at more than one *connection point* in a *network*, including:

(1) example single line diagram and relevant *protection systems* and *control systems* used by existing *connection* arrangements;

(2) a description of the characteristics of supply; and

(3) an indication of the likely impact on terms and conditions of *connection*,

as relevant to each optional differing *connection point*;

(o) a statement of further information required from the *Connection Applicant* for the preparation of the *detailed response*, including:

(1) details of the *Connection Applicant's connection* requirements, and the *Connection Applicant's* specifications of the *facility* to be *connected*, consistent with the requirements advised in accordance with paragraphs (a) to (c); and

(2) details of the *Connection Applicant's* reasonable expectations of the level and standard of service of *power transfer capability* that the *network* should provide;

(3) the *Connection Applicant's* proposal for any *system strength remediation scheme*;

(p) an estimate of the enquiry fee payable by the *Connection Applicant* for the *detailed response*, including details of how components of the fee were calculated;

(q) the component of the estimate of the enquiry fee payable by the *Connection Applicant* to request the *detailed response*;

(r) an estimate of the application fee which is payable on submitting an *application to connect*; and

(s) any additional information relevant to the enquiry.

Schedule 5.4B Detailed Response to Enquiry

For the purposes of clause 5.3A.8(g), the following information must be included in the *detailed response*:

(a) the contact details for the relevant point of contact within the *Distribution Network Service Provider* who will manage the *application to connect*;

(b) written details of each technical requirement relevant to the proposed *plant* as relevant to the:

(1) *automatic access standards*;

(2) *minimum access standards*;

(3) any applicable *plant standards*; and

(4) *normal voltage* level, if that is to change from the *nominal voltage* level;

(c) details of the *connection* requirements based on the *Connection Applicant's* specifications of the *facility* to be *connected*;

(d) details of the level and standard of service of *power transfer capability* that the *Distribution Network Service Provider*, with reasonable endeavours, considers the *network* provides at the location of the *connection point* or *connection points*, if options have been made available under clause S5.4A(n);

(e) *negotiated access standards* that will require *AEMO's* involvement in accordance with clause 5.3.4A(c);

(e1) written details of:

(1) the minimum *three phase fault level* at the *connection point*; ~~and~~

(2) the results of the *Network Service Provider's* preliminary assessment of the impact of the new *connection* undertaken in accordance with the *system strength impact assessment guidelines* and clause 5.3.4B; and

(3) except where, under clause 5.3.4B(a3), the *Network Service Provider* is not required to calculate the *system strength locational factor*:

(i) the indicative *system strength quantity* for the *connection point*;

(ii) the *system strength locational factor* for the *connection point*; and

(iii) the relevant *system strength node* and the indicative *system strength charge* for the *connection point* using the then applicable *system strength unit price*.

(f) a list of the technical data to be included with the *application to connect*, which may vary depending on the *connection* requirements and the type, rating and location of the *facility* to be *connected*. The list provided under this paragraph (f) will generally be in the nature of the information set out in schedule 5.5 but may be varied by the *Distribution Network Service Provider* as appropriate to suit the size and complexity of the proposed *facility* to be *connected*;

(g) commercial information to be supplied by the *Connection Applicant* to allow a *Network Service Provider* (as is relevant) to make an assessment of the ability of the *Connection Applicant* to satisfy the prudential requirements set out in rules 6.21 and 6A.28;

(h) so far as is relevant, and in relation to services that the *Distribution Network Service Provider* intends to provide, an itemised estimate of *connection* costs including:

(1) *connection services* charges;

(2) costs associated with the proposed metering requirements for the *connection*;

(3) costs of any *network extension*;

(4) details of *augmentation* required to provide the *connection* and associated costs;

(5) details of the interface equipment required to provide the *connection* and associated costs;

(6) details of any ongoing operation and maintenance costs and charges to be undertaken by the *Distribution Network Service Provider*; and

(7) other incidental costs and their basis of calculation;

(i) an explanation of the factors affecting each component of the itemised estimate of *connection* costs and the further information that will be taken into account by the *Distribution Network Service Provider* in preparing the final itemised statement of *connection* costs to be provided under clause 5.3.6(b2)(1);

(j) using reasonable endeavours, all risks and obligations in respect of the proposed *connection* associated with planning and environmental laws not contained in the *Rules*;

(k) a draft *connection agreement* that contains the proposed terms and conditions for *connection* to the *network* including those of the kind set out in schedule 5.6 and:

(1) an explanation of the terms and conditions in the *connection agreement* that need to be finalised; and

(2) if relevant, further information necessary from the *Connection Applicant* to finalise the *connection agreement*;

(l) a description of the process for lodging the *application to connect*, including:

(1) the options open to the *Connection Applicant* in submitting an *application to connect* in accordance with clause 5.3A.9;

(2) the further analysis to be undertaken by the *Distribution Network Service Provider* as part of the *Distribution Network Service Provider's* assessment of the *application to connect*;

(3) further information required from the *Connection Applicant* for the *Distribution Network Service Provider* to assess the *application to connect*; and

(4) an outline of proposed milestones (and their timeframes) for *connection* and access activities which may be modified from time to time by agreement of the parties, where such agreement must not be unreasonably withheld;

(m) the application fee payable when submitting an *application to connect*;

(n) whether the *Distribution Network Service Provider* agrees to the *detailed response* remaining valid for a specified period of time to allow the *Connection Applicant* to lodge an *application to connect* within that time; and

(o) any additional information relevant to the *application to connect*.

Schedule 5.5 Technical Details to Support Application for Connection and Connection Agreement

S5.5.7 Power System Design Data Sheet, Power System Setting Data Sheet and Power System Model Guidelines

(a) *AEMO* must, subject to paragraphs (b) and (c), develop, *publish* and maintain, in accordance with the *Rules consultation procedures*:

(1) a *Power System Design Data Sheet* describing, for relevant *plant technologies*, *plant* design parameters including *plant* configurations, impedances, time constants, non-linearities, ratings and capabilities to be provided under clauses 3.11.5(b)(5), 3.11.9(g), 4.3.4(o), 5.2.3(j), 5.2.3(k), 5.2.3A(a), 5.2.4(c), 5.2.4(d), 5.2.5(d), 5.2.5(e), 5.3.9(b)(2), 5.3.12(b)(2), S5.2.4, S5.3.1, S5.3a.1 and this schedule 5.5;

(2) a *Power System Setting Data Sheet* describing, for relevant *power systems* and *control system* technologies, the *protection system* and *control system* functions and their settings, including configurations, gains, time constants, delays, deadbands, non-linearities and limits to be provided under clauses 3.11.5(b)(5), 3.11.9(g), 4.3.4(o), 5.2.3(j), 5.2.3(k), 5.2.3A(a), 5.2.3A(b), 5.2.4(c), 5.2.4(d), 5.2.5(d), 5.2.5(e), 5.3.9(b)(2), 5.3.12(b)(2), S5.2.4, S5.3.1, S5.3a.1 and this schedule 5.5; and

(3) *Power System Model Guidelines* describing, for relevant *power system* technologies at the *transmission system* and *distribution system* level, *AEMO's* requirements when developing mathematical models for *plant*, including the impact of their *control systems* and *protection systems* on *power system security* to be provided under clauses 3.11.5(b)(5), 3.11.9(g), 4.3.4(o), 5.2.3(j), 5.2.3(k), 5.2.3A(a), 5.2.3A(b), 5.2.4(c), 5.2.4(d), 5.2.5(d), 5.2.5(e), 5.3.9(b)(2), 5.3.12(b)(2), S5.2.4, S5.3.1, S5.3a.1 and this schedule 5.5.

(b) When developing, *publishing* and maintaining the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet* under paragraph (a), *AEMO* must have regard to the purpose of the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*, which is to:

(1) allow *plant* and equipment to be mathematically modelled by *AEMO* with sufficient accuracy to permit:

(i) the *power system* operating limits for ensuring *power system security* to be quantified with the lowest practical safety margins;

(ii) the assessment of proposed *negotiated access standards*;

(iii) settings of *control systems* and *protection systems* of *plant* and *networks* to be assessed and quantified for maximum practical performance of the *power system*; and

(iv) the efficient procurement of *SRASs* and *NSCASs*; and

(2) identify for each type of data its category in terms of clause S5.5.2.

(b1) The *Power System Model Guidelines* must specify:

(1) the information, including the types of models, that:

(i) *Generators* must provide under clause 5.2.5(d), clause 5.2.5(e), clause 5.3.9(b)(2), clause S5.2.4 and clause S5.5.6;

(ii) *Network Service Providers* must provide under clause 4.3.4(o), clause 5.2.3(j) and clause 5.2.3(k);

(iii) *Network Users* must provide under clause 5.2.4(c), clause 5.2.4(d), clause 5.3.12(b)(2) and clause S5.3.1(a1);

(iv) *Market Network Service Providers* must provide under clause 5.2.3A(a), clause 5.2.3A(b), clause 5.3.12 and clause S5.3a.1(a1);

(v) prospective *NSCAS* tenderers must provide under clause 3.11.5(b)(5); and

(vi) prospective *SRAS Providers* must provide under clause 3.11.9(g);

(2) the model accuracy requirements that are applicable to each type of model provided, as well as the types of *generating systems* and *plant* and equipment that the model accuracy requirements apply to;

(3) when information to which the *Power System Model Guidelines* relates must be provided;

(4) a process to be followed in circumstances where a person is unable to provide information required to be provided under clauses 3.11.5(b)(5), 3.11.9(g), 4.3.4(o), 5.2.3(j), 5.2.3(k), 5.2.3A(a), 5.2.3A(b), 5.2.4(c), 5.2.4(d), 5.2.5(d), 5.2.4(e), 5.3.9(b)(2), 5.3.12(b)(2), S5.2.4, S5.3.1, S5.3a.1, S5.5.6, schedule 5.5 or as otherwise required by the *Power System Model Guidelines*, *Power System Design Data Sheet* or *Power System Setting Data Sheet*;

(5) guidance on the factors that *AEMO* will take into account when determining the circumstances under which *AEMO* will request information to be provided, including the *power system* conditions that necessitate the usage of a certain type of model in order to achieve the desired level of accuracy;

(6) the format in which information must be provided and any material *AEMO* requires to assess the accuracy of information provided to it; and

(7) the circumstances in which model source code is required to be provided.

(c) In developing and amending the *Power System Model Guidelines*, the *Power System Design Data Sheet* and the *Power System Setting Data Sheet*, *AEMO* must:

(1) have regard to the reasonable costs of efficient compliance by *Registered Participants* with those guidelines and data sheets compared to the likely benefits from the use of the information provided under the guidelines and data sheets;

(2) have regard to any requirements to protect the intellectual property and confidential information of third parties, including where those third parties are not *Registered Participants*; and

(3) have regard to *Distribution Network Service Providers*' and *Transmission Network Service Providers*' requirements for data and modelling information that is reasonably necessary for the relevant provider to fulfil its obligations under the *Rules* or *jurisdictional electricity legislation*.

(d) *AEMO* may amend the *Power System Model Guidelines*, the *Power System Design Data Sheet* or the *Power System Setting Data Sheet* from time to time.

(e) Any person may submit a written request (with reasons) for *AEMO* to amend the *Power System Model Guidelines*, the *Power System Design Data Sheet* or the *Power System Setting Data Sheet* from time to time.

(f) In developing and amending the *Power System Model Guidelines*, the *Power System Design Data Sheet* or the *Power System Setting Data Sheet*, *AEMO* must, subject to paragraph (g), consult with *Registered Participants* and such other persons who, in *AEMO*'s reasonable opinion have, or have identified themselves as having, an interest in the *Power System Model Guidelines*, in accordance with the *Rules consultation procedures*.

(g) *AEMO* is not required to comply with the *Rules consultation procedures* when making minor or administrative amendments to the *Power System Model Guidelines*, the *Power System Design Data Sheet* or the *Power System Setting Data Sheet*.

(h) *AEMO* may at the conclusion of the *Rules consultation procedures* under paragraph (f) or otherwise under paragraph (g), amend the relevant data sheet or guidelines (if necessary).

Schedule 5.5.4 Network Plant and Apparatus Setting Data

Data Description	Units	Data Category
Protection Data for Protection relevant to Connection Point:		
Reach of all protections on *transmission lines*, or cables	ohms or % on 100 MVA base	S, D
Number of protections on each item	Text	S, D
Total fault clearing times for near and remote faults	ms	S, D, R1
Line reclosure sequence details	Text	S, D, R1
Tap Change Control Data:		
Time delay settings of all *transformer* tap changers.	Seconds	D, R1

Data Description	Units	Data Category
Reactive Compensation:		
Location and Rating of individual *shunt reactors*	MVAr	D, R1
Location and Rating of individual *shunt capacitor* banks	MVAr	D, R1
Capacitor bank capacitance	microfarads	D
Inductance of switching *reactor* (if fitted)	millihenries	D
Resistance of capacitor plus *reactor*	Ohms	D
Details of special controls (e.g. Point-on-wave switching)	Text	D
For each shunt reactor or capacitor bank:		
Method of switching	Text	S
Details of automatic control logic such that operating characteristics can be determined	Text	D, R1
FACTS Installation:		
Data sufficient to enable static and dynamic performance of the installation to be modelled	Text, diagrams control settings	S, D, R1
Transmission line flow control device	Text,	D
Details of the operation of the control device under normal operation conditions (including startup and shutdown of the line) and during a fault (close up and remote)	diagrams	
Models for the control device and transmission line appropriate for load flow, small signal stability and transient stability analysis	Text, diagrams	D
Capability of the line flow control device	KA, MVA, MW	D
Details of the rate of change of flow capability of the control device	Text	D

Data Description	Units	Data Category
Details of the capability of the control device to provide frequency and voltage control	Text	D
Description of possible failure modes of control device	Text	D
Details of performance of the control device under disturbance conditions including changes in AC frequency, variations in AC system voltages and Ac system waveform distortion.	Text	D
For DC control devices, contribution to the AC system short circuit level	KA, MVA	D
Short circuit ratio		
The value of the *short circuit ratio* in the *minimum access standard* in clause S5.2.5.15(b), clause S5.3.11(b) or clause S5.3a.7(b) (as applicable) or if the procedures in clause 5.3.4A have been followed, a *negotiated access standard* agreed pursuant to clause S5.2.5.15(c), clause S5.3.11(c) or clause S5.3a.7(c) (as applicable).~~The lowest short circuit ratio at the *connection point* for which the *generating system*, including its *control systems*: (i) will be commissioned to maintain stable operation; and (ii) has the design capability to maintain stable operation.~~ ~~For the purposes of the above, "short circuit ratio" is the synchronous *three phase fault level* (expressed in MVA) at the *connection point* divided by the rated output of the *generating system* (expressed in MW or MVA).~~	Numeric ratio	S, D, R1

Schedule 5.8 Distribution Annual Planning Report

For the purposes of clause 5.13.2(c), the following information must be included in a *Distribution Annual Planning Report*:

(a) information regarding the *Distribution Network Service Provider* and its *network*, including:

(1) a description of its *network*;

(2) a description of its operating environment;

(3) the number and types of its *distribution assets*;

(4) methodologies used in preparing the *Distribution Annual Planning Report*, including methodologies used to identify system limitations and any assumptions applied; and

(5) analysis and explanation of any aspects of forecasts and information provided in the *Distribution Annual Planning Report* that have changed significantly from previous forecasts and information provided in the preceding year;

(b) forecasts for the *forward planning period*, including at least:

(1) a description of the forecasting methodology used, sources of input information, and the assumptions applied;

(2) *load* forecasts:

(i) at the *transmission-distribution connection points*;

(ii) for *sub-transmission lines*; and

(iii) for *zone substations*,

including, where applicable, for each item specified above:

(iv) *total capacity*;

(v) *firm delivery capacity* for summer periods and winter periods;

(vi) *peak load* (summer or winter and an estimate of the number of hours per year that 95% of *peak load* is expected to be reached);

(vii) *power factor* at time of *peak load*;

(viii) load transfer capacities; and

(ix) generation capacity of known *embedded generating units*;

(2A) forecast use of *distribution services* by *embedded generating units*:

(i) at the *transmission-distribution connection points*;

(ii) for *sub-transmission lines*; and

(iii) for *zone substations*,

including, where applicable, for each item specified above:

(iv) *total capacity* to accept *supply* from *embedded generating units*;

(v) *firm delivery capacity* for each period during the year;

(vi) peak *supply* into the *distribution network* from *embedded generating units* (at any time during the year) and an estimate of the number of hours per year that 95% of the peak is expected to be reached; and

(vii) *power factor* at time of peak *supply* into the *distribution network*;

(3) forecasts of future *transmission-distribution connection points* (and any associated *connection assets*), *sub-transmission lines* and *zone substations*, including for each future *transmission-distribution connection point* and *zone substation*:

(i) location;

(ii) future *loading level*; and

(iii) proposed commissioning time (estimate of month and year);

(4) forecasts of the *Distribution Network Service Provider's* performance against any applicable performance targets in a *service target performance incentive scheme*; and

(5) a description of any factors that may have a material impact on its *network*, including factors affecting;

(i) fault levels;

(ii) *voltage* levels;

(iii) other *power system security* requirements;

(iv) the quality of *supply* to other *Network Users* (where relevant); and

(v) ageing and potentially unreliable assets;

(b1) for all *network* asset retirements, and for all *network* asset de-ratings that would result in a system limitation, that are planned over the *forward planning period*, the following information in sufficient detail relative to the size or significance of the asset:

(1) a description of the *network* asset, including location;

(2) the reasons, including methodologies and assumptions used by the *Distribution Network Service Provider*, for deciding that it is necessary or prudent for the *network* asset to be retired or *de-rated*, taking into account factors such as the condition of the *network* asset;

(3) the date from which the *Distribution Network Service Provider* proposes that the *network* asset will be retired or *de-rated*; and

(4) if the date to retire or *de-rate* the *network* asset has changed since the previous *Distribution Annual Planning Report*, an explanation of why this has occurred;

(b2) for the purposes of subparagraph (b1), where two or more *network* assets are:

(1) of the same type;

(2) to be retired or *de-rated* across more than one location;

(3) to be retired or *de-rated* in the same calendar year; and

(4) each expected to have a replacement cost less than $200,000 (as varied by a *cost threshold determination*),

those assets can be reported together by setting out in the *Distribution Annual Planning Report*:

(5) a description of the *network* assets, including a summarised description of their locations;

(6) the reasons, including methodologies and assumptions used by the *Distribution Network Service Provider*, for deciding that it is necessary or prudent for the *network* assets to be retired or *de-rated*, taking into account factors such as the condition of the *network* assets;

(7) the date from which the *Distribution Network Service Provider* proposes that the *network* assets will be retired or *de-rated*; and

(8) if the calendar year to retire or *de-rate* the *network* assets has changed since the previous *Distribution Annual Planning Report*, an explanation of why this has occurred;

(c) information on *system limitations* for *sub-transmission lines* and *zone substations*, including at least:

(1) estimates of the location and timing (month(s) and year) of the system limitation;

(2) analysis of any potential for *load transfer capacity* between *supply* points that may decrease the impact of the *system limitation* or defer the requirement for investment;

(3) impact of the *system limitation*, if any, on the capacity at *transmission-distribution connection points*;

(4) a brief discussion of the types of potential solutions that may address the *system limitation* in the *forward planning period*, if a solution is required; and

(5) where an estimated change in forecast *load* or forecast *generation* would defer a forecast *system limitation* for a period of at least 12 months, include:

(i) an estimate of the month and year in which a *system limitation* is forecast to occur as required under subparagraph (1);

(ii) the relevant *connection points* at which the estimated reduction in forecast *load* may occur; and

(iii) the estimated change in forecast *load* ore forecast *generation* in MW or improvements in *power factor* needed to defer the forecast system limitation;

(d) for any *primary distribution feeders* for which a *Distribution Network Service Provider* has prepared forecasts of *maximum demands* under clause 5.13.1(d)(1)(iii) and which are currently experiencing an overload, or are forecast to experience an overload in the next two years the *Distribution Network Service Provider* must set out:

(1) the location of the *primary distribution feeder*;

(2) the extent to which load exceeds, or is forecast to exceed, 100% (or lower utilisation factor, as appropriate) of the *normal cyclic rating* under normal conditions (in summer periods or winter periods);

(3) the types of potential solutions that may address the overload or forecast overload; and

(4) where an estimated reduction in forecast *load* would defer a forecast overload for a period of 12 months, include:

(i) estimate of the month and year in which the overload is forecast to occur;

(ii) a summary of the location of relevant *connection points* at which the estimated reduction in forecast *load* would defer the overload;

(iii) the estimated reduction in forecast *load* in MW needed to defer the forecast system limitation;

(d1) for any *primary distribution feeders* for which a *Distribution Network Service Provider* has prepared forecasts of demand for *distribution services* by *embedded generating units* under clause 5.13.1(d1)(3) and which are currently experiencing a *system limitation*, or are forecast to experience a *system limitation* in the next two years, the *Distribution Network Service Provider* must set out:

(1) the location of the *primary distribution feeder*;

(2) the extent to which demand for *distribution services* by *embedded generating units* exceeds, or is forecast to exceed, 100% (or lower utilisation factor, as appropriate) of the normal capacity to provide those *distribution services* under normal conditions;

(3) the types of potential solutions that may address the *system limitation* or forecast *system limitation*;

(4) where an estimated reduction in demand for *distribution services* by *embedded generating units* would defer a forecast *system limitation* for a period of 12 months, include:

(i) an estimate of the month and year in which the *system limitation* is forecast to occur;

(ii) a summary of the location of relevant *connection points* at which the estimated reduction in demand for *distribution services* by *embedded generating units* would defer the *system limitation*; and

(iii) the estimated reduction in demand for *distribution services* by *embedded generating units* in MW needed to defer the forecast *system limitation*;

(e) a high-level summary of each *RIT-D project* for which the *regulatory investment test for distribution* has been completed in the preceding year or is in progress, including:

(1) if the *regulatory investment test for distribution* is in progress, the current stage in the process;

(2) a brief description of the *identified need*;

(3) a list of the *credible options* assessed or being assessed (to the extent reasonably practicable);

(4) if the *regulatory investment test for distribution* has been completed a brief description of the conclusion, including:

(i) the net economic benefit of each *credible option*;

(ii) the estimated capital cost of the *preferred option*; and

(iii) the estimated construction timetable and commissioning date (where relevant) of the *preferred option*; and

(5) any impacts on *Network Users*, including any potential material impacts on *connection* charges and *distribution use of system* charges that have been estimated;

(f) for each identified *system limitation* which a *Distribution Network Service Provider* has determined will require a *regulatory investment test for distribution*, provide an estimate of the month and year when the test is expected to commence;

(g) a summary of all committed investments to be carried out within the *forward planning period* with an estimated capital cost of $2 million or more (as varied by a *cost threshold determination*) that are to address an urgent and unforeseen *network* issue as described in clause 5.17.3(a)(1), including:

(1) a brief description of the investment, including its purpose, its location, the estimated capital cost of the investment and an estimate of the date (month and year) the investment is expected to become operational;

(2) a brief description of the alternative options considered by the *Distribution Network Service Provider* in deciding on the preferred investment, including an explanation of the ranking of these options to the committed project. Alternative options could include, but are not limited to, *generation* options, demand side options, and options involving other *distribution* or *transmission networks*;

(h) the results of any joint planning undertaken with a *Transmission Network Service Provider* in the preceding year, including:

(1) a summary of the process and methodology used by the *Distribution Network Service Provider* and relevant *Transmission Network Service Providers* to undertake joint planning;

(2) a brief description of any investments that have been planned through this process, including the estimated capital costs of the investment and an estimate of the timing (month and year) of the investment; and

(3) where additional information on the investments may be obtained;

(i) the results of any joint planning undertaken with other *Distribution Network Service Providers* in the preceding year, including:

(1) a summary of the process and methodology used by the *Distribution Network Service Providers* to undertake joint planning;

(2) a brief description of any investments that have been planned through this process, including the estimated capital cost of the investment and an estimate of the timing (month and year) of the investment; and

(3) where additional information on the investments may be obtained;

(j) information on the performance of the *Distribution Network Service Provider's network*, including:

(1) a summary description of reliability measures and standards in *applicable regulatory instruments*;

(2) a summary description of the quality of *supply* standards that apply, including the relevant codes, standards and guidelines;

(3) a summary description of the performance of the *distribution network* against the measures and standards described under subparagraphs (1) and (2) for the preceding year;

(4) where the measures and standards described under subparagraphs (1) and (2) were not met in the preceding year, information on the corrective action taken or planned;

(5) a summary description of the *Distribution Network Service Provider's* processes to ensure compliance with the measures and standards described under subparagraphs (1) and (2); and

(6) an outline of the information contained in the *Distribution Network Service Provider's* most recent submission to the *AER* under the *service target performance incentive scheme*;

(k) information on the *Distribution Network Service Provider's asset management* approach, including:

(1) a summary of any *asset management* strategy employed by the *Distribution Network Service Provider*;

(1A) an explanation of how the *Distribution Network Service Provider* takes into account the cost of *distribution losses* when developing and implementing its *asset management* and investment strategy;

(2) a summary of any issues that may impact on the *system limitations* identified in the *Distribution Annual Planning Report* that has been identified through carrying out *asset management*; and

(3) information about where further information on the *asset management* strategy and methodology adopted by the *Distribution Network Service Provider* may be obtained;

(l) information on the *Distribution Network Service Provider's* demand management activities and activities relating to *embedded generating units*, including:

(1) a qualitative summary of:

(i) *non-network options* that have been considered in the past year, including *generation* from *embedded generating units*;

(ii) key issues arising from *applications to connect embedded generating units* received in the past year;

(iii) actions taken to promote non-network proposals in the preceding year, including *generation* from *embedded generating units*; and

(iv) the *Distribution Network Service Provider's* plans for demand management and *generation* from *embedded generating units* over the *forward planning period*;

(2) a quantitative summary of:

(i) *connection* enquiries received under clause 5.3A.5 and of the total, the number for *non-registered embedded generators*;

(ii) *applications to connect* received under clause 5.3A.9 and of the total, the number for *non-registered embedded generators*; and

(iii) the average time taken to complete *applications to connect*; and

(3) a quantitative summary of:

(i) *enquiries* under clause 5A.D.2 in relation to the *connection* of *micro embedded generators* or *non-registered embedded generators*; and

(ii) applications for a *connection service* under clause 5A.D.3 in relation to the *connection* of *micro embedded generators* or *non-registered embedded generators*;

(m) information on the *Distribution Network Service Provider's* investments in information technology and communication systems which occurred in the preceding year, and planned investments in information technology and communication systems related to management of *network* assets in the *forward planning period*; and

(n) a regional development plan consisting of a map of the *Distribution Network Service Provider's network* as a whole, or maps by regions, in accordance with the *Distribution Network Service Provider's* planning methodology or as required under any *regulatory obligation or requirement*, identifying:

(1) *sub-transmission lines*, *zone substations* and *transmission-distribution connection points*; and

(2) any system limitations that have been forecast to occur in the *forward planning period*, including, where they have been identified, overloaded *primary distribution feeders*; and

(o) the analysis of the known and potential interactions between:

(1) any *emergency frequency control schemes*, or emergency controls in place under clause S5.1.8, on its *network*; and

(2) *protection systems* or *control systems* of *plant connected* to its *network* (including consideration of whether the settings of those systems are fit for purpose for the future operation of its network),

undertaken under clause 5.13.1(d)(6), including a description of proposed actions to be undertaken to address any adverse interactions.

(q) the *system strength locational factor* for each *system strength connection point* for which it is the *Network Service Provider* and the corresponding *system strength node*.

Schedule 5.9 Demand side engagement document (clause 5.13.1(h))

For the purposes of clause 5.13.1(h), the following information must be included in a *Distribution Network Service Provider's demand side engagement document*:

(a) a description of how the *Distribution Network Service Provider* will investigate, develop, assess and report on potential *non-network options*;

(b) a description of the *Distribution Network Service Provider's* process to engage and consult with potential *non-network providers* to determine their level of interest and ability to participate in the development process for potential *non-network options*;

(c) an outline of the process followed by the *Distribution Network Service Provider* when negotiating with *non-network providers* to further develop a potential *non-network option*;

(d) an outline of the information a *non-network provider* is to include in a non-*network* proposal, including, where possible, an example of a best practice non-network proposal;

(e) an outline of the criteria that will be applied by the *Distribution Network Service Provider* in evaluating non-*network* proposals;

(f) an outline of the principles that the *Distribution Network Service Provider* considers in developing the payment levels for *non-network options*;

(g) a reference to any applicable incentive payment schemes for the implementation of *non-network options* and whether any specific criteria is applied by the *Distribution Network Service Provider* in its application and assessment of the scheme;

(h) the methodology to be used for determining *avoided Customer TUOS charges*, in accordance with clauses 5.4AA and 5.5; and~~;~~

(i) a summary of the factors the *Distribution Network Service Provider* takes into account when negotiating *connection agreements* with *Embedded Generators*;

(j) the process used, and a summary of any specific regulatory requirements, for setting charges and the terms and conditions of *connection agreements* for *embedded generating units*;

(k) the process for lodging an *application to connect* for an *embedded generating unit* and the factors taken into account by the *Distribution Network Service Provider* when assessing such applications;

(l) worked examples to support the description of how the *Distribution Network Service Provider* will assess potential *non-network options* in accordance with paragraph (a);

(m) a hyperlink to any relevant, publicly available information produced by the *Distribution Network Service Provider*;

(n) a description of how parties may be listed on the *demand side engagement register*; and

(o) the *Distribution Network Service Provider's* contact details.

CHAPTER 5A

5A. Electricity connection for retail customers

Part A Preliminary

5A.A.2 Application of this Chapter

(a) This Chapter does not apply to, or in relation to, a *connection applicant* that is a *Registered Participant* or an *Intending Participant* unless the *Registered Participant* or *Intending Participant* is acting as the agent of a *retail customer*.

(a1) This Chapter, other than Part E, does not apply to, or in relation to, a *connection applicant* in relation to the provision of a *connection service* in respect of a *large inverter based resource.*

(b) Where a *non-registered embedded generator* (other than a *non-registered embedded generator* to whom paragraph (a1) applies) wishing to *connect* an *embedded generating unit* to a *Distribution Network Service Provider's network*:

(1) falls within a particular class (or subclass) of *connection applicant* for which that *Distribution Network Service Provider* provides a *standard connection service*, this Chapter will apply;

(2) does not fall within a particular class (or subclass) of *connection applicant* for which that *Distribution Network Service Provider* provides a *standard connection service*, paragraph (c) will apply.

(c) A *non-registered embedded generator* that meets the requirements in paragraph (b)(2) may elect to seek *connection* of the relevant *embedded generating unit* under rule 5.3A instead of this Chapter.

(d) Any election made by a *non-registered embedded generator* under paragraph (c) must be:

(1) made before an *enquiry* is made or if no *enquiry* is made, before a *connection application* is lodged with the relevant *Distribution Network Service Provider*;

(2) in writing; and

(3) delivered to the relevant *Distribution Network Service Provider* at the same time as lodging an *enquiry* under clause 5.3A.5.

(e) For the avoidance of doubt, clause 5A.C.1(a)(2) is still applicable when a *non-registered embedded generator* meets the requirements in paragraph (b)(1).

Part E Connection charges

5A.E.1 Connection charge principles

(a) This clause states the ***connection charge principles***.

(b) A *retail customer* (other than a *non-registered embedded generator* or a *real estate developer*) who applies for a *connection service* for which an *augmentation* is required cannot be required to make a capital contribution

towards the cost of the *augmentation* (insofar as it involves more than an *extension*) if:

(1) the application is for a *basic connection service*; or

(2) a relevant threshold set in the *Distribution Network Service Provider's connection policy* is not exceeded.

Note

In general, the intention is to exclude deep system *augmentation* charges for *retail customers*.

(b1) Paragraph (a) does not apply to charges for *system strength connection works* in accordance with clause 5.3.4B(e).

(c) Subject to paragraph (b), in determining *connection charges* in accordance with its *connection policy*, a *Distribution Network Service Provider* must apply the following principles:

(1) if an *extension* to the *distribution network* is necessary in order to provide a *connection service*, *connection charges* for the service may include a reasonable capital contribution towards the cost of the *extension* necessary to provide the service;

(2) if *augmentation* of *premises connection assets* at the *retail customer*'s *connection* point is necessary in order to provide a *connection service*, *connection charges* for the service may include a reasonable capital contribution towards the cost of the *augmentation* of *premises connection assets* at the *connection point* necessary to provide the service;

(3) if *augmentation* of the *distribution system* is necessary in order to provide a *standard connection service*, *connection charges* for the service may include a reasonable capital contribution towards the cost of the *augmentation* necessary to provide the service;

(4) if *augmentation* of the *distribution system* is necessary in order to provide a *connection service* under a negotiated *connection contract*, *connection charges* for the service may, subject to any agreement to the contrary, include a reasonable capital contribution towards the cost of *augmentation* of the *distribution system* to the extent necessary to provide the service and to any further extent that a prudent service provider would consider necessary to provide efficiently for forecast *load* growth;

(5) despite subparagraphs (1) to (4) if *augmentation* of the *distribution system* is necessary in order to provide, on the application of a *real estate developer*, *connection services* for premises comprised in a *real estate development*, *connection charges* for the services may, subject to any agreement to the contrary, include a reasonable capital contribution towards the cost of *augmentation* of the *distribution system* to the extent necessary to provide the services and to any further extent that a prudent service provider would consider necessary to provide efficiently for forecast *load* growth;

(6) however, a capital contribution may only be required in the circumstances described in subparagraphs (1) to (5) if provision for the

costs has not already been made through existing *distribution use of system* charges or a tariff applicable to the *connection*.

(d) If:

(1) a *connection asset* ceases, within 7 years after its construction or installation, to be dedicated to the exclusive use of the *retail customer* occupying particular premises; and

(2) the *retail customer* is entitled, in accordance with the *connection charge guidelines*, to a refund of *connection charges*,

the *Distribution Network Service Provider* must make the refund, and may recover the amount of the refund, by way of a *connection charge*, from the new users of the asset.

(e) For the purposes of paragraph (d), a person is taken to be a new user of a *connection asset* if the asset comes to be used to provide a *connection* to that person's premises

(f) For the purposes of this clause capital contribution includes a prepayment or financial guarantee.

CHAPTER 6

6. Economic Regulation of Distribution Services

Part I Distribution Pricing Rules

6.18 Distribution Pricing Rules

6.18.1 Application of this Part

This Part applies to tariffs and *tariff classes* related to *direct control services*.

6.18.1A Tariff structure statement

(a) A *tariff structure statement* of a *Distribution Network Service Provider* must include the following elements:

(1) the *tariff classes* into which *retail customers* for *direct control services* will be divided during the relevant *regulatory control period*;

(2) the policies and procedures the *Distribution Network Service Provider* will apply for assigning *retail customers* to tariffs or reassigning *retail customers* from one tariff to another (including any applicable restrictions);

(2A) a description of the strategy or strategies the *Distribution Network Service Provider* has adopted, taking into account the pricing principle in clause 6.18.5(h), for the introduction of *export tariffs* including where relevant the period of transition (*export tariff transition strategy*);

(3) the structures for each proposed tariff;

(4) the *charging parameters* for each proposed tariff; and

(5) a description of the approach that the *Distribution Network Service Provider* will take in setting each tariff in each *pricing proposal* of the *Distribution Network Service Provider* during the relevant *regulatory control period* in accordance with clause 6.18.5.

Note

Under clause 11.141.13(a), a *tariff structure statement* of a *Distribution Network Service Provider* applicable during the tariff transition period for the *Distribution Network Service Provider* must also include, for each proposed *export tariff*, the basic export level or the manner in which the basic export level will be determined and the eligibility conditions applicable to each proposed *export tariff*.

(b) A *tariff structure statement* must comply with the *pricing principles for direct control services*.

(c) A *Distribution Network Service Provider* must comply with the *tariff structure statement* approved by the *AER* and any other applicable requirements in the *Rules*, when the provider is setting the prices that may be charged for *direct control services*.

(d) Subject to clause 6.18.1B, a *tariff structure statement* may not be amended during a *regulatory control period* except to the extent necessary to comply with clause 6.20.3A.

Note

Rule 6.13 still applies in relation to a *tariff structure statement* because that rule deals with the revocation and substitution of a distribution determination (which includes a *tariff structure statement*) as opposed to its amendment.

(e) A *tariff structure statement* must be accompanied by an *indicative pricing schedule* which sets out, for each tariff for each *regulatory year* of the *regulatory control period*, the indicative price levels determined in accordance with the *tariff structure statement*.

6.18.2 Pricing proposals

(a) A *Distribution Network Service Provider* must:

(1) submit to the *AER*, as soon as practicable, and in any case within 15 *business days*, after *publication* of the distribution determination, a *pricing proposal* (the **initial *pricing proposal***) for the first *regulatory year* of the *regulatory control period*; and

(2) submit to the *AER*, at least 3 months before the commencement of the second and each subsequent *regulatory year* of the *regulatory control period*, a further *pricing proposal* (an **annual *pricing proposal***) for the relevant *regulatory year*.

(b) A *pricing proposal* must:

(1) **[Deleted]**;

(2) set out the proposed tariffs for each *tariff class* that is specified in the *Distribution Network Service Provider's tariff structure statement* for the relevant *regulatory control period*;

(3) set out, for each proposed tariff, the *charging parameters* and the elements of service to which each *charging parameter* relates;

(4) set out, for each *tariff class* related to *standard control services*, the expected weighted average revenue for the relevant *regulatory year* and also for the current *regulatory year*;

(5) set out the nature of any variation or adjustment to the tariff that could occur during the course of the *regulatory year* and the basis on which it could occur;

(6) set out how *designated pricing proposal charges* are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those charges in the previous *regulatory year*;

(6A) set out how *jurisdictional scheme amounts* for each *approved jurisdictional scheme* are to be passed on to customers and any adjustments to tariffs resulting from over or under recovery of those amounts;

(6B) describe how each *approved jurisdictional scheme* that has been amended since the *last jurisdictional scheme approval date* meets the *jurisdictional scheme eligibility criteria*;

(6C) set out how *system strength charges* for *system strength connection points* on its *network* are to be passed through as described in clause 6.20.3A;

(7) demonstrate compliance with the *Rules* and any applicable distribution determination, including the *Distribution Network Service Provider's tariff structure statement* for the relevant *regulatory control period*;

(7A) demonstrate how each proposed tariff is consistent with the corresponding indicative pricing levels for the relevant *regulatory year* as set out in the relevant *indicative pricing schedule*, or explain any material differences between them; and

(8) describe the nature and extent of change from the previous *regulatory year* and demonstrate that the changes comply with the *Rules* and any applicable distribution determination.

(c) The *AER* must on receipt of a *pricing proposal* from a *Distribution Network Service Provider publish* the proposal.

(d) At the same time as a *Distribution Network Service Provider* submits a *pricing proposal* under paragraph (a), the *Distribution Network Service Provider* must submit to the *AER* a revised *indicative pricing schedule* which sets out, for each tariff and for each of the remaining *regulatory years* of the *regulatory control period*, the indicative price levels determined in accordance with the *Distribution Network Service Provider's tariff structure statement* for that *regulatory control period* and updated so as to take into account that *pricing proposal*.

(e) Where the *Distribution Network Service Provide*r submits an annual *pricing proposal*, the revised *indicative pricing schedule* referred to in paragraph (d) must also set out, for each relevant tariff under clause 6.18.1C, the indicative price levels for that relevant tariff for each of the remaining *regulatory years* of the *regulatory control period*, updated so as to take into account that *pricing proposal*.

6.18.7 Recovery of designated pricing proposal charges

(a) A *pricing proposal* must provide for tariffs designed to pass on to *retail customers* the *designated pricing proposal charges* to be incurred by the *Distribution Network Service Provider*.

(b) The amount to be passed on to *retail customers* for a particular *regulatory year* must not exceed the estimated amount of the *designated pricing proposal charges* adjusted for over or under recovery in accordance with paragraph (c).

(c) The over and under recovery amount must be calculated in a way that:

(1) subject to subparagraphs (2) and (3) below, is consistent with the method determined by the *AER* in the relevant distribution determination for the *Distribution Network Service Provider*;

(2) ensures a *Distribution Network Service Provider* is able to recover from *retail customers* no more and no less than the *designated pricing proposal charges* it incurs; and

(3) adjusts for an appropriate cost of capital that is consistent with the *allowed rate of return* used in the relevant distribution determination for the relevant *regulatory year*.

(d) Notwithstanding anything else in this clause 6.18.7, a *Distribution Network Service Provider* may not recover charges under this clause to the extent these are:

(1) recovered through the *Distribution Network Service Provider's annual revenue requirement*;

(2) recovered under clause 6.18.7A; or

(3) recovered from another *Distribution Network Service Provider*.

(e) Notwithstanding anything else in this clause 6.18.7, a *Distribution Network Service Provider* must provide for a charge applicable to each *system strength connection point* for which it is the *Network Service Provider* to recover from the relevant *Distribution Network User*, on a pass through basis as described in clause 6.20.3A, the *annual system strength charges* for the *system strength connection point* determined by the relevant *System Strength Service Provider*.

Part J Billing and Settlements

6.20 Billing and Settlements Process

This ~~clause~~ rule describes the manner in which *Distribution Customers* and *Embedded Generators* are billed by *Distribution Network Service Providers* for *distribution services* and to pass through *system strength charges* and how payments for *distribution services* and pass through of *system strength charges* are settled.

6.20.3A Billing to recover system strength charges

(a) A *Distribution Network Service Provider* must bill *Distribution Network Users* at *system strength connection points* on its *distribution network* to pass through *system strength charges* in accordance with this clause.

(b) The *Distribution Network Service Provider* must bill the *Distribution Network User* on a pass through basis so that the amount, structure and timing of the amount billed by the *Distribution Network Service Provider* replicates as far as is reasonably practicable the amount, structure and timing of the corresponding *system strength charge* billed to the *Distribution Network Service Provider* by the relevant *System Strength Service Provider*.

(c) A bill for charges to recover *system strength charges* from a *Distribution Network User* must be issued to the relevant *Distribution Network User* and must identify the *system strength connection point* and provide other information required by the *Distribution Network User* to verify the charge.

(d) To avoid doubt, charges to recover *system strength charges* from *Distribution Network Users* billed in accordance with this clause are not *network charges* within the meaning of clause 6B.A1.2.

6.20.4 Obligation to pay

A *Distribution Network User* must pay *distribution service* charges and charges to recover *system strength charges* properly charged to it and billed in accordance with this clause by the due date specified in the bill.

CHAPTER 6A

6A. Economic Regulation of Transmission Services

Part C Regulation of Revenue - Prescribed Transmission Services

6A.7 Matters relevant to the adjustment of revenue cap after making of revenue determination

6A.7.3 Cost pass through

(a1) Any of the following is a *pass through event* for a *transmission determination*:

(1) a *regulatory change event*;

(2) a *service standard event*;

(3) a *tax change event*;

(4) an *insurance event*;

(5) any other event specified in a *transmission determination* as a *pass through event* for the determination; and

(6) an *inertia shortfall event*.~~; and~~

Note

This paragraph (6) does not apply in Victoria (see clause 5.20B.4(a)).

~~(7) a *fault level shortfall event*.~~

(a) If a *positive change event* occurs, a *Transmission Network Service Provider* may seek the approval of the *AER* to pass through to *Transmission Network Users* a *positive pass through amount*.

(b) If a *negative change event* occurs, the *AER* may require the *Transmission Network Service Provider* to pass through to *Transmission Network Users* a *negative pass through amount* as determined by the *AER* under paragraph (g).

Positive pass through

(c) To seek the approval of the *AER* to pass through a *positive pass through amount*, a *Transmission Network Service Provider* must submit to the *AER*, within 90 *business days* of the relevant *positive change event* occurring, a written statement which specifies:

(1) the details of the *positive change event*;

(2) the date on which the *positive change event* occurred;

(3) the *eligible pass through amount* in respect of that *positive change event*;

(4) the *positive pass through amount* the *Transmission Network Service Provider* proposes in relation to the *positive change event*;

(5) the amount of the *positive pass through amount* that the *Transmission Network Service Provider* proposes should be passed through to *Transmission Network Users* in the *regulatory year* in which, and each *regulatory year* after that in which, the *positive change event* occurred;

(6) evidence:

(i) of the actual and likely increase in costs referred to in subparagraph (3); and

(ii) that such costs occur solely as a consequence of the *positive change event*; and

(7) such other information as may be required pursuant to any relevant *regulatory information instrument*.

(d) If the *AER* determines that a *positive change event* has occurred in respect of a statement under paragraph (c), the *AER* must determine:

(1) the *approved pass through amount*; and

(2) the amount of that *approved pass through amount* that should be passed through to *Transmission Network Users* in the *regulatory year* in which, and each *regulatory year* after that in which, the *positive change event* occurred,

taking into account the matters referred to in paragraph (j).

(e) Subject to paragraph (l), if the *AER* does not make the determinations referred to in paragraph (d) within 40 *business days* from the later of the date it receives the *Transmission Network Service Provider's* statement and accompanying evidence under paragraph (c), and the date it receives any additional information required under paragraph (e1), then, on the expiry of that period, the *AER* is taken to have determined that:

(1) the *positive pass through amount* as proposed in the *Transmission Network Service Provider's* statement under paragraph (c) is the *approved pass through amount* in respect of that *positive change event*; and

(2) the amount of that *positive pass through amount* that the provider proposes in its statement under paragraph(c) should be passed through to *Transmission Network Users* in the *regulatory year* in which, and each *regulatory year* after that in which, the *positive change event* occurred, is the amount that should be so passed through in each such *regulatory year*.

(e1) A *Transmission Network Service Provider* must provide the *AER* with such additional information as the *AER* requires for the purpose of making a determination under paragraph (d) within the time specified by the *AER* in a notice provided to the *Transmission Network Service Provider* by the *AER* for that purpose.

Negative pass through

(f) A *Transmission Network Service Provider* must submit to the *AER*, within 90*business days* of becoming aware of the occurrence of a *negative change event* for the *Transmission Network Service Provider*, a written statement which specifies:

(1) the details of the *negative change event* concerned;

(2) the date the *negative change event* occurred;

(3) the costs in the provision of *prescribed transmission services* that the *Transmission Network Service Provider* has saved and is likely to save as a result of the *negative change event* until:

(i) unless sub paragraph(ii) applies – the end of the *regulatory control period* in which the *negative change event* occurred; or

(ii) if the *transmission determination* for the *regulatory control period* following that in which the *negative change event* occurred does not make any allowance for the pass through of the cost savings - the end of the *regulatory control period* following that in which the *negative change event* occurred;

(4) the aggregate amount of those saved costs that the *Transmission Network Service Provider* proposes should be passed through to *Transmission Network Users*;

(5) the amount of the costs referred to in subparagraph(4) the *Transmission Network Service Provider* proposes should be passed through to *Transmission Network Users* in the *regulatory year* in which, and each *regulatory year* after that in which, the *negative change event* occurred; and

(6) such other information as may be required pursuant to any relevant *regulatory information instrument*.

(f1) If the occurrence of the *negative change event* is not notified by the *Transmission Network Service Provider* to the *AER* under paragraph (f) then, as soon as is reasonably practicable and before making a determination referred to in paragraph (g), the *AER* must notify the *Transmission Network Service Provider* of the occurrence of that *negative change event*.

(g) If a *negative change event* occurs (whether or not the occurrence of that *negative change event* is notified by the provider to the *AER* under paragraph (f)) and the *AER* determines to impose a requirement on the *Transmission Network Service Provider* in relation to that *negative change event* as described in paragraph (b), the *AER* must determine:

(1) the *required pass through amount*; and

(2) taking into account the matters referred to in paragraph (j):

(i) how much of that required pass through amount should be passed through to Transmission Network Users (the negative pass through amount); and

(ii) the amount of that *negative pass through amount* that should be passed through to *Transmission Network Users* in the *regulatory year* in which, and each *regulatory year* after that in which, the *negative change event* occurred.

(g1) Subject to paragraph (l), if the *AER* does not make the determinations referred to in paragraph (g) within 40 *business days* from:

(1) where the *Transmission Network Service Provider* notifies the *AER* of the occurrence of the negative change event under paragraph (f) - the later of the date the *AER* receives the *Transmission Network Service*

Provider's statement under paragraph (f) and the date the *AER* receives any information required by the *AER* under paragraph (h); or

(2) where the *Transmission Network Service Provider* does not notify the *AER* of the occurrence of the negative change event under paragraph (f) – the later of the date the *AER* notifies the *Transmission Network Service Provider* under paragraph (g1) and the date the *AER* receives any information required by the *AER* under paragraph (h),

then the *AER* is taken to have determined that the required pass through amount is zero.

(h) A *Transmission Network Service Provider* must provide the *AER* with such information as the *AER* requires for the purpose of making a determination under paragraph (g) within the time specified by the *AER* in a notice provided to the *Transmission Network Service Provider* by the *AER* for that purpose.

Consultation

(i) Before making a determination under paragraph (d) or (g), the *AER* may consult with the relevant *Transmission Network Service Provider* and such other persons as the *AER* considers appropriate, on any matters arising out of the relevant *pass through event* as the *AER* considers appropriate.

Relevant factors

(j) In making a determination under paragraph (d) or (g) in respect of a *Transmission Network Service Provider*, the *AER* must take into account:

(1) the matters and proposals set out in any statement given to the *AER* by the *Transmission Network Service Provider* under paragraphs (c) or (f) (as the case may be);

(2) in the case of a *positive change event*, the increase in costs in the provision of *prescribed transmission services* that, as a result of the *positive change event*, the *Transmission Network Service Provider* has incurred and is likely to incur until:

(i) unless subparagraph(ii) applies – the end of the *regulatory control period* in which the *positive change event* occurred; or

(ii) if the *transmission determination* for the *regulatory control period* following that in which the *positive change event* occurred does not make any allowance for the recovery of that increase in costs – the end of the *regulatory control period* following that in which the *positive change event* occurred;

(2A) in the case of a *negative change event*, the costs in the provision of *prescribed transmission services* that, as a result of the *negative change event*, the *Transmission Network Service Provider* has saved and is likely to save until:

(i) unless subparagraph(ii) applies – the end of the *regulatory control period* in which the *negative change event* occurred; or

(ii) if the *transmission determination* for the *regulatory control period* following that in which the *negative change event* occurred does not make any allowance for the pass through of

those cost savings to *Transmission Network Users* – the end of the *regulatory control period* following that in which the *negative change event* occurred;

(3) in the case of a *positive change event*, the efficiency of the provider's decisions and actions in relation to the risk of the *positive change event*, including whether the provider has failed to take any action that could reasonably be taken to reduce the magnitude of the *eligible pass through amount* in respect of that *positive change event* and whether the provider has taken or omitted to take any action where such action or omission has increased the magnitude of the amount in respect of that *positive change event*;

(4) the time cost of money based on the *allowed rate of return* for the *Transmission Network Service Provider* for the *regulatory control period* in which the *pass through event* occurred;

(5) the need to ensure that the *Transmission Network Service Provider* only recovers any actual or likely increment in costs under this paragraph (j) to the extent that such increment is solely as a consequence of a *pass through event*;

(6) in the case of a *tax change event*, any change in the way another *tax* is calculated, or the removal or imposition of another *tax*, which, in the *AER's* opinion, is complementary to the *tax change event* concerned;

(6A) whether the costs of the *pass through event* have already been factored into the calculation of the provider's *maximum allowed revenues* for the *regulatory control period* in which the *pass through event* occurred or will be factored into the calculation of the provider's *maximum allowed revenues* for a subsequent *regulatory control period*;

(6B) the extent to which the costs that the *Transmission Network Service Provider* has incurred and is likely to incur are the subject of a previous determination made by the *AER* under this clause 6A.7.3; and

(7) any other factors the *AER* considers relevant

Extension of time limits

(k) The *AER* must, by written notice to a *Transmission Network Service Provider*, extend a time limit fixed in paragraph (c) or (f) if the *AER* is satisfied that the difficulty of assessing or quantifying the effect of the relevant *pass through event* justifies the extension.

(l) If the *AER* is satisfied that the making of a determination under paragraph (d) or (g) involves issues of such complexity or difficulty that the time limit fixed in paragraph (e) or (g1) should be extended, the *AER* may extend that time limit by a further period of up to 60 *business days*, provided that it gives written notice to the *Transmission Network Service Provider* of that extension not later than 10 *business days* before the expiry of that time limit.

(m) If the *AER* extends a time limit under paragraph (l), it must make available on its website a notice of that extension as soon as is reasonably practicable.

(n) Subject to paragraph (q), if the *AER* gives a written notice to the *Transmission Network Service Provider* stating that it requires information from an

Authority in order to make a determination under paragraph (d) or (g) then, for the purpose of calculating elapsed time, the period between when the *AER* gives that notice to the *Transmission Network Service Provider* and when the *AER* receives that information from that *Authority* is to be disregarded.

(o) Subject to paragraph (q), if the *AER* gives a written notice to the *Transmission Network Service Provider* stating that, in order to make a determination under paragraph (d) or (g), it requires information that it anticipates will be made publicly available by a judicial body or royal commission then, for the purpose of calculating elapsed time, the period between when the *AER* gives that notice to the *Transmission Network Service Provider* and when that information is made publicly available is to be disregarded.

(p) Where the *AER* gives a notice to the *Transmission Network Service Provider* under paragraph (n) or (o), it must:

(1) as soon as reasonably practicable make available on its website a notice stating when the period referred to in paragraph (n) or (o), as the case may be, has commenced;

(2) as soon as is reasonably practicable make available on its website a notice stating when the period referred to in paragraph (n) or (o), as the case may be, has ended; and

(3) if the information specified in that notice is required from an *Authority*, promptly request that information from the relevant *Authority*.

(q) Paragraphs (n) and (o) do not apply if the *AER* gives the notice specified in those paragraphs to the *Transmission Network Service Provider* later than 10 *business days* before the expiry of the time limit fixed in paragraphs (e) or (g1).

Part E Procedure - Revenue determinations and pricing methodologies

6A.15 Revocation of revenue determination or amendment of pricing methodology for wrong information or error

(a) The *AER* may (but is not required to) revoke a *revenue determination* or amend an existing *pricing methodology* during a *regulatory control period* if it appears to the *AER* that the *revenue determination* or *pricing methodology* is affected by a material error or deficiency of one or more of the following kinds:

(1) a clerical error or an accidental slip or omission;

(2) a miscalculation or misdescription;

(3) a defect in form; or

(4) a deficiency resulting from the provision of false or materially misleading information to the *AER*.

(b) If the *AER* revokes a *revenue determination* under paragraph (a), the *AER* must make a new *revenue determination* in substitution for the revoked *revenue determination* to apply for the remainder of the *regulatory control period* for which the revoked *revenue determination* was to apply.

(c) If the *AER* revokes and substitutes a *revenue determination* under paragraphs (a) and (b), the substituted *revenue determination* must only vary from the revoked *revenue determination* to the extent necessary to correct the relevant error or deficiency.

(d) If the *AER* amends a *pricing methodology* under paragraph (a), the amended methodology applies to the setting of prices for the next *financial year* and for the remainder of the relevant *regulatory control period* or in the case of a change to the methodology for setting the *system strength charge*, for the next *regulatory year* and the remaining *regulatory years* in the *system strength charging period*.

(e) If the *AER* amends a *pricing methodology* under paragraph (a), the amended methodology must only vary from the existing *pricing methodology* to the extent necessary to correct the relevant error or deficiency.

(f) The *AER* may only revoke and substitute a *revenue determination* or amend a *pricing methodology* under this rule 6A.15, if it has first consulted with the relevant *Transmission Network Service Provider* and such other persons as it considers appropriate.

Part J Prescribed Transmission Services - Regulation of Pricing

6A.22 Terms used in Part J

6A.22.1 Aggregate annual revenue requirement (AARR)

For the purposes of this Part J, the *aggregate annual revenue requirement* (*AARR*) for *prescribed transmission services* provided by a *Transmission Network Service Provider*, is the *maximum allowed revenue* referred to in clause 6A.3.1 adjusted:

(1) in accordance with clause 6A.3.2;

(2) by subtracting:

(i) the operating and maintenance costs expected to be incurred in the provision of *prescribed common transmission services*; and

(ii) expected *system strength service payments*; and

(3) by any allocation as agreed between *Transmission Network Service Providers* in accordance with clause 6A.29.3.

6A.22.2 Annual service revenue requirement (ASRR)

For the purposes of this Part J, the *annual service revenue requirement* (*ASRR*) for a *Transmission Network Service Provider* is the portion of the *AARR* for *prescribed transmission services* provided by a *Transmission Network Service Provider* that is allocated to each category of *prescribed transmission services* for that *Transmission Network Service Provider* and that is calculated by multiplying the *AARR* by the *attributable cost share* for that category of services in accordance with the principles in clause 6A.23.2.

6A.22.3 Meaning of attributable cost share

(a) For a *Transmission Network Service Provider* for a *category of prescribed transmission services*, the *attributable cost share* for that *Transmission*

Network Service Provider for that category of services must, subject to any adjustment required or approved, under this Part, substantially reflect the ratio of:

(1) the costs of the *transmission system* assets directly attributable to the provision of that *category of prescribed transmission services*; to

(2) the total costs of all the *Transmission Network Service Provider's transmission system* and any other *transmission system* assets directly attributable to the provision of *prescribed transmission services*.

(b) The costs of the *transmission system* assets referred to in paragraph (a) refers to optimised replacement cost or to an accepted equivalent to optimised replacement cost that is referable to values contained in the accounts of the *Transmission Network Service Provider*.

6A.22.4 Meaning of attributable connection point cost share

(a) For a *Transmission Network Service Provider* for *prescribed entry services* and *prescribed exit services*, the *attributable connection point cost share* for that *Transmission Network Service Provider* for each of those categories of services must substantially reflect the ratio of:

(1) the costs of the *transmission system* assets directly attributable to the provision of *prescribed entry services* or *prescribed exit services*, respectively, at a *transmission network connection point*; to

(2) the total costs of all the *Transmission Network Service Provider's transmission system* assets directly attributable to the provision of *prescribed entry services* or *prescribed exit services*, respectively.

(b) The costs of the *transmission system* assets referred to in paragraph (a) refers to optimised replacement cost or to an accepted equivalent to optimised replacement cost that is referable to values contained in the accounts of the *Transmission Network Service Provider*.

6A.23 Pricing Principles for Prescribed Transmission Services

6A.23.1 Introduction

(a) This rule 6A.23 sets out the principles that constitute the *Pricing Principles for Prescribed Transmission Services*.

(b) The *Pricing Principles for Prescribed Transmission Services* are given effect by *pricing methodologies*.

6A.23.2 Principles for the allocation of the aggregate annual revenue requirement

The *aggregate annual revenue requirement* for *prescribed transmission services* provided by a *Transmission Network Service Provider* is to be allocated in accordance with the following principles:

(a) The *AARR* for a *Transmission Network Service Provider* must be allocated to each *category of prescribed transmission services* in accordance with the *attributable cost share* for each such category of services.

(b) This allocation results in the *annual service revenue requirement* (*ASRR*) for that category of services.

(c) The allocation of the *AARR* must be such that:

(1) every portion of the *AARR* is allocated; and

(2) the same portion of the *AARR* is not allocated more than once.

(d) Where, as a result of the application of the *attributable cost share*, a portion of the *AARR* would be attributable to more than one category of *prescribed transmission services*, that *attributable cost share* is to be adjusted and applied such that any costs of a *transmission system* asset that would otherwise be attributed to the provision of more than one category of *prescribed transmission services*, is allocated as follows:

(1) to the provision of *prescribed TUOS services*, but only to the extent of the *stand-alone amount* for that *category of prescribed transmission services*;

(2) if any portion of the costs of a *transmission system* asset is not allocated to *prescribed TUOS services*, under subparagraph (1), that portion is to be allocated to *prescribed common transmission services*, but only to the extent of the *stand-alone amount* for that *category of prescribed transmission services*;

(3) if any portion of the costs of a *transmission system* asset is not attributed to *prescribed transmission services* under subparagraphs (1) and (2), that portion is to be attributed to *prescribed entry services* and/or *prescribed exit services*.

6A.23.3 Principles for the allocation of the annual service revenue requirement to connection points

The allocation of the *annual service revenue requirement* of a *Transmission Network Service Provider* for each *category of prescribed transmission services* to the relevant *connection points* (other than the *connection points* of any *Market Network Service Provider*), and the manner and sequence in which adjustments can be made to those allocations, for the relevant *regulatory year* to which the *maximum allowed revenue* relates, must be in accordance with the following principles:

(a) The *annual service revenue requirement* for *prescribed TUOS services* is to be allocated between a locational component (*pre-adjusted locational component*) and a non-locational component (*pre-adjusted non-locational component*) either:

(1) as to 50% to each component; or

(2) an alternative allocation to each component, that is based on a reasonable estimate of future *network* utilisation and the likely need for future *transmission* investment, and that has the objective of providing more efficient locational signals to *Market Participants*, *Intending Participants* and end users.

(b) Subject to paragraph (d), the *pre-adjusted locational component* is to be adjusted by:

(1) subtracting any amount estimated as proceeds from *auctions* or any portion of *settlements residue* allocated to the *directional interconnector* which is not the subject of a *SRD agreement* estimated to be receivable by the *Transmission Network Service Provider* from the *connection points* for each relevant *directional interconnector* as referred to in clause 3.18.4, with that amount including an adjustment calculated in accordance with paragraph (f); and

(2) adding or subtracting the amount estimated by the *Co-ordinating Network Service Provider* for the *modified load export charge* receivable by or payable to the *Transmission Network Service Provider* under clause 6A.29A.5, with that amount including an adjustment calculated in accordance with paragraph (f),

(the *adjusted locational component*).

(c) If the *adjusted locational component* is a positive amount, it is to be allocated to *transmission network connection points* of *Transmission Customers* on the basis of their proportionate use of the relevant *transmission system* assets, excluding, to avoid doubt, assets which constitute an *identified user shared asset* or *designated network asset*. The *CRNP methodology* and the *modified CRNP methodology* are two permitted methodologies to estimate the proportionate use of the relevant *transmission system* assets as referred to in paragraph (b).

(d) If the *adjusted locational component* is a negative amount, then the *adjusted locational component* will be deemed to be zero and the absolute value of that negative amount is to be subtracted from the *pre-adjusted non-locational component* under subparagraph (e)(1).

(e) The *pre-adjusted non-locational component* is to be adjusted by:

(1) subtracting the absolute value of the amount (if any) referred to in paragraph (d);

(2) adding or subtracting any amount for *settlements residue* (not being any *auction* amount referred to in subparagraph (b)(1), or *settlements residue* that accrue on a *designated network asset* due to *boundary point loss factors*, but otherwise ~~but~~ including any amount of *settlements residue* due to *intra-regional loss factors*) estimated to be receivable by or payable to the *Transmission Network Service Provider* in accordance with clause 3.6.5(a)(3);

(3) adding or subtracting any adjustment arising as a result of the application of clauses 6A.23.4(c) and (d);

(4) adding or subtracting any amount arising as a result of the application of prudent discounts (if any) under clauses 6A.26.1(d) to (g);

(5) adding or subtracting any *over-recovery amount* or *under-recovery amount*, with that amount including an adjustment calculated in accordance with paragraph (f); and

(6) adding the amount of *NTP function* fees advised to the *Co-ordinating Network Service Provider* in accordance with clause 2.11.3(ba),

(the *adjusted non-locational component*).

(f) The adjustment referred to in subparagraphs (b)(1), (b)(2) and (e)(5) must be calculated as the sum of:

(1) the difference between:

(i) the estimated amount payable or receivable for a service (or component of a service) referred to in subparagraphs (b)(1), (b)(2) and (e)(5) in year t - 1; and

(ii) the amount actually payable or receivable for that service (or that component of service) in year t - 1;

(2) the difference between:

(i) the actual amount payable or receivable for that service (or that component of service) in year t - 2; and

(ii) the estimate of the amount payable or receivable for that service (or component of a service) in year t - 2 that was used for the purposes of clause (f)(1)(i) in accordance with the *Co-ordinating Network Service Provider's* or the *Transmission Network Service Provider's* (as the case may be) *pricing methodology* that applied in year t - 1; and

(3) grossed up on the basis of the *allowed rate of return* that applies to the *Transmission Network Service Provider* at the time when the further adjustment is to be made.

(g) For the purposes of paragraph (f):

"year t"	means the *regulatory year* in which adjustments are made under paragraph (f).
"year t - 1"	means the *regulatory year* immediately prior to year t or, where year t is the first year of a *regulatory control period*, the last *regulatory year* of the previous *regulatory control period*.
"year t - 2"	means the *regulatory year* immediately prior to year t - 1 or, where year t is the: (1) first year of a *regulatory control period*, the penultimate *regulatory year* of the previous *regulatory control period*; and (2) second year of a *regulatory control period*, the last *regulatory year* of the previous *regulatory control period*.

(h) The *annual service revenue requirement* for *prescribed common transmission services* is to be adjusted by adding the operating and maintenance costs incurred in the provision of those services and *system strength service payments* (to the extent that those costs or payments were subtracted from the *maximum allowed revenue* in accordance with clause 6A.22.1).

(h1) In addition to the adjustment under paragraph (h), for a *Transmission Network Service Provider* who is a *System Strength Service Provider*:

(1) the *annual service revenue requirement* for *prescribed common transmission services* for a *regulatory year* must be adjusted by:

(i) subtracting the *Transmission Network Service Provider's* forecast of its *annual system strength revenue* for the *regulatory year* made in accordance with clause 6A.23.3A(a)(1); and

(ii) adding or subtracting any adjustment for the *regulatory year* arising as a result of the application of clause 6A.23.3A(b); and

(2) a reference to the *annual service revenue requirement* or *ASRR* for *prescribed common transmission services* for that *Transmission Network Service Provider* is taken to be a reference to the amount adjusted in accordance with subparagraph (h1)(1).

(i) The whole of the *annual service revenue requirement* for *prescribed entry services* is to be allocated to *transmission network connection points* (other than *connection points* of any *Market Network Service Provider*) in accordance with the *attributable connection point cost share* for *prescribed entry services* that are provided by the *Transmission Network Service Provider* at that *connection point*.

(j) The whole of the *annual service revenue requirement* for *prescribed exit services* is to be allocated to *transmission network connection points* (other than *connection points* of any *Market Network Service Provider*) in accordance with the *attributable connection point cost share* for *prescribed exit services* that are provided by the *Transmission Network Service Provider* at that *connection point*.

6A.23.3A Annual system strength revenue and system strength revenue adjustment for a System Strength Service Provider

(a) A *Transmission Network Service Provider* who is a *System Strength Service Provider* must determine:

(1) a forecast of its *annual system strength revenue* for year t applying the principles in the *pricing methodology guidelines*;

(2) an estimate of its actual *annual system strength revenue* for year t-1 applying the principles in the *pricing methodology guidelines*; and

(3) its actual *annual system strength revenue* for year t-2.

(b) For year t, the *annual service revenue requirement* for *prescribed common transmission services* is to be adjusted by calculating the following adjustment amount and (if positive) adding the adjustment amount or (if negative) subtracting the absolute value of the adjustment amount:

(1) the forecast annual system strength revenue for year t-1 less the estimated actual annual system strength revenue for year t-1; plus

(2) the estimated actual annual system strength revenue for year t-2 less the actual annual system strength revenue for year t-2; then

(3) grossed up on the basis of the *allowed rate of return* that applies to the *Transmission Network Service Provider* at the time when the adjustment is made.

(c) For the purposes of paragraph (b):

actual annual system strength revenue	means for a *regulatory year*, the actual *annual system strength revenue* for the *regulatory year* calculated at the time of setting prices in March of the year after the relevant *regulatory year* ends;
forecast annual system strength revenue	means for a *regulatory year*, the *Transmission Network Services Provider's* forecast of *system strength revenue* determined in accordance with paragraph (a)(1) and deducted under clause 6A.23.3(h1)(1)(i);
estimated actual annual system strength revenue	means for a *regulatory year*, the estimate of actual annual system strength revenue for the *regulatory year* made at the time of setting prices in March of the year before the *relevant regulatory year* starts;
"year t"	means the *regulatory year* for which the adjustments are being determined;
"year t - 1"	means the *regulatory year* immediately prior to year t or, where year t is the first year of a *regulatory control period*, the last *regulatory year* of the previous *regulatory control period*; and
"year t - 2"	means the *regulatory year* immediately prior to year t - 1 or, where year t is: (1) the first year of a *regulatory control period*, the penultimate *regulatory year* of the previous *regulatory control period*; or (2) the second year of a *regulatory control period*, the last regulatory year of the previous *regulatory control period*.

6A.23.4 Principles for the recovery of the Annual Service Revenue Requirement as prices

The recovery of the *annual service revenue requirement* for a *Transmission Network Service Provider* as prices for *Transmission Customers* (but not *Market Network Service Providers*) or for *System Strength Transmission Service Users* for the relevant *regulatory year* to which the *maximum allowed revenue* relates, must be made in accordance with the following principles:

(a) The *Transmission Network Service Provider* must have separate prices for:

(1) *prescribed TUOS services – adjusted locational component*;

(2) *prescribed TUOS services – adjusted non-locational component*;

(3) *prescribed common transmission services* (other than *system strength transmission services*);

(4) *prescribed entry services*; ~~and~~

(5) *prescribed exit services*; and

(6) *system strength transmission services*.

(b) Prices for recovering the *prescribed TUOS services - adjusted locational component*:

(1) must be based on demand at times of greatest utilisation of the *transmission network* by *Transmission Customers* and for which *network* investment is most likely to be contemplated;

(2) subject to subparagraph (3) below, must not change by more than 2% on a *load* weighted average basis for the relevant *region* compared with the previous *regulatory year*; and

(3) are not subject to the limitation in subparagraph (2):

(i) to the extent that the change in prices relate to the adjusted *modified load export charge* as referred to in clause 6A.23.3(b)(2); or

(ii) if, since the commencement of the previous *regulatory year*:

(A) the *load* at the *connection point* has materially altered;

(B) in connection with that alteration, the *Transmission Customer* requested a renegotiation of its *connection agreement* with the *Transmission Network Service Provider*; and

(C) the *AER* approved the change.

(c) If, in the case of an increase in prices for recovering the *prescribed TUOS services - adjusted locational component*, the application of paragraph (b)(2) would result in a shortfall for the *prescribed TUOS services - adjusted locational component*, any shortfall may be recovered by increasing the *prescribed TUOS services - non-locational component* in clause 6A.23.3(e)(3).

(d) If, in the case of a decrease in prices for recovering the *prescribed TUOS services - adjusted locational component*, the application of paragraph (b)(2) would result in a surplus for the *prescribed TUOS services - adjusted locational component*, any surplus must be offset by decreasing the *prescribed TUOS services - non-locational component* in clause 6A.23.3(e)(3).

(e) Prices for recovering the *prescribed TUOS services - adjusted non-locational component* must be on a *postage-stamp basis*.

(f) Prices for recovering *prescribed common transmission services* must be on a *postage-stamp basis*.

(g) Prices for recovering *prescribed entry services* and *prescribed exit services* must be a fixed annual amount.

(h) Prices for or in respect of *system strength transmission services* must be determined in accordance with clause 6A.23.5 or clause 6A.23.6, as applicable.

6A.23.5 System strength charge

(a) This clause applies to a *Transmission Network Service Provider* who is a *System Strength Service Provider*.

(b) In this clause:

system strength charging period means, for a *System Strength Service Provider*, each period running from the start of the second *regulatory year* in a *regulatory control period* of the *System Strength Service Provider* to the end of the first *regulatory year* in its next *regulatory control period.*

(c) The *pricing methodology* of a *Transmission Network Service Provider* who is a *System Strength Service Provider* must provide for the *System Strength Transmission Service User* for a *system strength connection point* to pay an *annual system strength charge* for the *system strength connection point* determined in accordance with this rule, in equal monthly instalments from the time determined in accordance with the *pricing methodology guidelines*.

(d) If the obligation to pay the *system strength charge* in relation to a *system strength connection point* commences part way through a *regulatory year*, the *System Strength Service Provider* must calculate the monthly instalments of the *annual system strength charge* for the remaining months of the *regulatory year* on a pro rata basis.

(e) The *annual system strength charge* for a *system strength connection point* for a *regulatory year* must be calculated in accordance with the following formula:

$$SSC = SSUP \times SSL \times SSQ$$

where:

SSC	is the *annual system strength charge* for the *regulatory year* (in $);
SSUP	is the *system strength unit price* of the *System Strength Service Provider* for the *system strength charging period* in which the *regulatory year* falls (in $/MVA) and for the *system strength node* used to determine the *system strength locational factor* for the *system strength connection point*;
SSL	is the *system strength locational factor* applicable to the *system strength connection point* for the *system strength charging period* in which the *regulatory year* falls, determined in accordance with paragraph (h); and
SSQ	is the *system strength quantity* for the *system strength connection point*, determined in accordance with paragraph (j) (in MVA).

(f) The *system strength unit price* of a *System Strength Service Provider* for a *system strength node* must be the same for each *regulatory year* in a *system strength charging period* except to the extent the *pricing methodology guidelines* permit indexation.

(g) A *System Strength Service Provider* must determine the *system strength node* used to determine the *system strength locational factor* for a *system strength connection point* in accordance with the *system strength impact assessment guidelines*.

(h) The *system strength locational factor* applicable to a *system strength connection point* is determined by the *Network Service Provider* for the *system strength connection point*. Where:

(1) the *System Strength Service Provider* is also the *Network Service Provider* for the *system strength connection point*, the *System Strength Service Provide*r must calculate the *system strength locational factor* applicable to each *system strength connection point* for which it is the *Network Service Provider* for each year of a *system strength charging period* in accordance with the *system strength impact assessment guidelines*; and

(2) the *System Strength Service Provider* is not the *Network Service Provider* for the *system strength connection point,* the *System Strength Service Provider* must request the relevant *Network Service Provider* under clause 5.3.4C(c) to calculate and notify to the *System Strength Service Provider* the *system strength locational factor*.

(i) A *System Strength Service Provider* must not change the s*ystem strength locational factor* used to calculate the *system strength charge* for a *system strength connection point* during a *system strength charging period*.

(j) Subject to paragraph (k), the *system strength quantity* for a *system strength connection point* is the product of:

(1) the *short circuit ratio*; and

(2) the *rated active power*, rated *power transfer capability* or *maximum demand* for the *system strength connection point*,

each as agreed in accordance with clause S5.2.5.15, clause S5.3.11 or clause S5.3a.7 (as applicable) and recorded in the relevant *performance standards* for the *plant connected* at the *system strength connection point*.

(k) If a change to the *system strength quantity* for a *system strength connection point* comes into effect part way through a *regulatory year*, the *System Strength Service Provider* must calculate the monthly instalments of the *annual system strength charge* for the remaining months of the *regulatory year* using the new *system strength quantity*.

6A.23.6 System strength pass through charge

(a) This clause applies to a *Transmission Network Service Provider* who is not a *System Strength Service Provider*.

(b) The *pricing methodology* of a *Transmission Network Service Provider* who is not a *System Strength Service Provider* must provide for a charge applicable

to each *system strength connection point* on its *network* to recover from the relevant *Transmission Network User*, on a pass through basis as described in paragraph (c), the *annual system strength charge* for the *system strength connection point* determined by the relevant *System Strength Service Provider*.

(c) The amount, structure and timing of the amount billed by the *Transmission Network Service Provider* to the *Transmission Network User* must replicate as far as is reasonably practical the amount, structure and timing of the corresponding *system strength charge* billed to the *Transmission Network Service Provider*.

6A.24 Pricing methodology

6A.24.1 Pricing methodologies generally

(a) In making a *transmission determination* under Part E of this Chapter 6A, the *AER* must include a decision to approve a proposed *pricing methodology* as part of that *transmission determination*, in accordance with that Part.

(b) A *pricing methodology* is a methodology, formula, process or approach that, when applied by a *Transmission Network Service Provider* (or a *Co-ordinating Network Service Provider* on behalf of *Transmission Network Service Providers* within a *region*);

(1) allocates the *aggregate annual revenue requirement* for *prescribed transmission services* provided by the *Transmission Network Service Provider* to each *category of prescribed transmission services*;

(2) provides for the manner and sequence of adjustments to the *annual service revenue requirement*;

(3) allocates the *annual service revenue requirement* to *transmission network connection points* (other than *connection points* of any *Market Network Service Provider*); ~~and~~

(4) determines the structure and recovery of prices for each *category of prescribed transmission services* under 6A.23.4(a); and

(5) for a *Transmission Network Service Provider* who is a *System Strength Service Provider*, determines, for each *system strength node* on its *transmission network*, the *system strength unit price* of the *System Strength Service Provider* for the *system strength charging period* commencing in the *regulatory control period*.

(b1) In addition to complying with any other requirements under this Chapter 6A, the *pricing methodology* of a *Transmission Network Service Provider* that is the *Co-ordinating Network Service Provider* for a *region* must provide for:

(1) the allocation of the *AARR* for *prescribed transmission services* provided by *Transmission Network Service Providers* within that *region*, including any allocation of the *AARR* as agreed between *Transmission Network Service Providers* in accordance with clause 6A.29.3;

(2) the calculation of *modified load export charges* consistent with clause 6A.29A.2;

(3) the allocation of *modified load export charges*:

(i) receivable by other Co-ordinating Network Service Providers in interconnected regions; and

(ii) payable to other Co-ordinating Network Service Providers in interconnected regions,

to each *Transmission Network Service Provider* within its *region* under clause 6A.29A.5; and

(4) the allocation of proceeds from *auctions* receivable by or payable to the *Transmission Network Service Provider* in its *region* as referred to in clause 6A.23.3(b)(1).

(c) The *pricing methodology* proposed by a *Transmission Network Service Provider* and approved by the *AER* in accordance with Part E of this Chapter 6A must:

(1) give effect to and be consistent with the *Pricing Principles for Prescribed Transmission Services*; and

(2) comply with the requirements of, and contain or be accompanied by such information as is required by, the *pricing methodology guidelines* made for that purpose under rule 6A.25.

(d) A *Transmission Network Service Provider* must comply with the *pricing methodology* approved by the *AER* as part of a *transmission determination* that applies to that *Transmission Network Service Provider*, and any other applicable requirements in the *Rules*, when the *Transmission Network Service Provider* is setting the prices that may be charged for the provision of *prescribed transmission services*.

(d1) Where this Chapter provides that a matter is to be determined in accordance with the *pricing methodology* of a *Transmission Network Service Provider* who is the *Co-ordinating Network Service Provider* for a *region*, then no other *pricing methodology* applies in relation to that matter.

(e) Subject to clause 6A.24.3, a *pricing methodology* applies for the duration of the relevant *regulatory control period* (or in the case of the *system strength unit price*, for the *system strength charging period* commencing in the *regulatory control period*).

(f) Subject to rule 6A.15, a *pricing methodology* may not be amended during the *regulatory control period*.

6A.24.2 Publication of pricing methodology and transmission network prices

A *Transmission Network Service Provider* must publish:

(a) a current copy of its *pricing methodology* on its website;

(b) if that *Transmission Network Service Provider* is also a *Co-ordinating Network Service Provider*, details of all *modified load export charges* to apply for the following *financial year* in accordance with the *pricing methodology guidelines* by 15 February each year; ~~and~~

(c) the prices for each of the *categories of prescribed transmission services* to apply for the following *financial year* by:

(1) 15 March each year, if the *regulatory year* which commences after that date begins on the commencement of a *financial year*; or

(2) 15 May each year, if the *regulatory year* which commences after that date does not begin on the commencement of a *financial year*; and

(d) for a *Transmission Network Service Provider* who is a *System Strength Service Provider*, at the same time it publishes it prices under paragraph (c), the *system strength unit price* for each *system strength node* on its *transmission network* for each *regulatory year* in the *regulatory control period,* updated for indexation (if applicable) at the commencement of each *regulatory year*.

6A.24.3 Basis for setting prices pending approval of pricing methodology

(a) This clause 6A.24.3 applies where:

(1) a *Transmission Network Service Provider* has submitted or resubmitted a proposed *pricing methodology* to the *AER* under clause 6A.10.1, 6A.11.2 or 6A.12.3;

(2) the *AER* has not made a final decision approving or amending that methodology under rule 6A.13 by a date that is 5 months prior to the commencement of the first *financial year* that a methodology referred to in subparagraph (1) would, if approved, apply (the **first pricing year**); and

(3) the *Transmission Network Service Provider* is reasonably required to commence the process of setting prices for the first pricing year.

(b) Despite clause 6A.24.1(d), a *Transmission Network Service Provider* must set prices for the first pricing year in accordance with:

(1) in the case where the *AER* has made a draft decision in which it proposes to approve a proposed *pricing methodology* - that proposed *pricing methodology*;

(2) if subparagraph (1) does not apply, the *pricing methodology* most recently approved for that *Transmission Network Service Provider* prior to the proposed *pricing methodology* referred to in subparagraph (a)(1);

(3) if there is no previously approved *pricing methodology* for that *Transmission Network Service Provider*, the previous method used by the *Transmission Network Service Provider* to establish prices, however determined, must be used in place of an approved *pricing methodology*.

(c) Despite the *AER* subsequently approving a *pricing methodology* for a *Transmission Network Service Provider*:

(1) the approved *pricing methodology* applies to the setting of prices for the year after the first pricing year and for the remainder of the relevant *regulatory control period*; and

(2) the *Transmission Network Service Provider* is not required to adjust, reverse or recompense any amounts to *Transmission Network Users* or their customers in connection with charges for services established pursuant to this clause 6A.24.3.

6A.24.4 Basis for setting prices pending approval of maximum allowed revenue

(a) This clause 6A.24.4 applies where:

(1) a *Transmission Network Service Provider* has submitted or resubmitted a *Revenue Proposal* under clause 6A.10.1, 6A.11.2 or 6A.12.3;

(2) the *AER* has not made a final decision on that *Revenue Proposal* under rule 6A.13 by a date that is 5 months prior to the commencement of the first *financial year* that a *Revenue Proposal* referred to in subparagraph (1) would, if approved, apply (the **first pricing year**); and

(3) the *Transmission Network Service Provider* is reasonably required to commence the process of setting prices for the first pricing year referred to in subparagraph (2)

(b) Despite any other applicable requirements in the *Rules*, a *Transmission Network Service Provider* may set prices for the first pricing year referred to in clause 6A.24.4(a)(2) in accordance with:

(1) in the case where the *AER* has made a draft decision in which it proposes to approve the proposed *maximum allowed revenue* for the first pricing year referred to in clause 6A.24.4(a)(2), that proposed *maximum allowed revenue* amount; or

(2) in the case where the *AER* has made a draft decision in which it has refused to approve the proposed *maximum allowed revenue* for the first pricing year referred to in clause 6A.24.4(a)(2), the *maximum allowed revenue* for the first pricing year that the *AER* has proposed for that amount in the draft decision made under clause 6A.12.1.

(c) For the avoidance of doubt, any *over-recovery amount* or *under-recovery amount* arising from the application of this clause 6A.24.4 is to be treated in accordance with clause 6A.23.3(c)(2)(iii).

6A.25 Pricing methodology guidelines for prescribed transmission services

6A.25.1 Making and amending of pricing methodology guidelines

(a) The *AER* must, in accordance with the *transmission consultation procedures*, make and *publish* guidelines (the *pricing methodology guidelines*) relating to the preparation by a *Transmission Network Service Provider* of a proposed *pricing methodology*.

(b) The *pricing methodology guidelines* must give effect to, and be consistent with, the *Pricing Principles for Prescribed Transmission Services*.

(c) The *AER* must *publish* the first *pricing methodology guidelines* by 31 October 2007 and there must be *pricing methodology guidelines* in force at all times after that date.

(d) In the event of an inconsistency between the *Rules* and the *pricing methodology guidelines*, the *Rules* prevail to the extent of that inconsistency.

(e) The *pricing methodology guidelines* are binding on the *AER* and each *Transmission Network Service Provider* to which they apply.

6A.25.2 Contents of pricing methodology guidelines

The *pricing methodology guidelines* must specify or clarify:

(a) the information that is to accompany a proposed *pricing methodology* being information that is necessary to allow the *AER* to form a view as to whether the proposed methodology is consistent with and gives effect to, the *Pricing Principles for Prescribed Transmission Services* and the requirements of this Part J;

(b) permitted pricing structures for recovery of the locational component of providing *prescribed TUOS services* under clause 6A.23.4(e), having regard to:

(1) the desirability of consistent pricing structures across the *NEM*; and

(2) the role of pricing structures in signaling efficient investment decisions and *network* utilisation decisions;

(c) in relation to prices set on a *postage-stamp basis*, permissible postage stamping structures for the prices for *prescribed common transmission services* and the recovery of the adjusted non-locational component of providing *prescribed TUOS services* having regard to:

(1) the desirability of a consistent approach across the *NEM*, particularly for *Transmission Customers* that have operations in multiple *participating jurisdictions*; and

(2) the desirability of signaling to actual and potential *Transmission Network Users* efficient investment decisions and *network* utilisation decisions;

(d) the types of *transmission system assets* that are directly attributable to each *category of prescribed transmission services*, having regard to the desirability of consistency of cost allocation across the *NEM*;

(e) those parts (if any) of a proposed *pricing methodology* or the information accompanying it, that will not be publicly disclosed without the consent of the *Transmission Network Service Provider*;

(f) those parts (if any) of a proposed *pricing methodology* or the information accompanying it, that will not be publicly disclosed without the consent of the *Transmission Network Service Provider*; ~~and~~

(g) the matters which *Transmission Network Service Providers* that are also *Co-ordinating Network Service Providers* must include in their *pricing methodologies* in accordance with clause 6A.24.1(b1) for:

(1) the allocation of the *AARR* for *prescribed transmission services* provided by *Transmission Network Service Providers* within that *region*, including any allocation of the *AARR* as agreed between *Transmission Network Service Providers* in accordance with clause 6A.29.3;

(2) the calculation of *modified load export charges* consistent with clause 6A.29A.2; and

(3) the allocation of *modified load export charges*:

(i) receivable by other Co-ordinating Network Service Providers in interconnected regions; and

(ii) payable to other Co-ordinating Network Service Providers in interconnected regions,

to each *Transmission Network Service Provider* within its *region* under clause 6A.29A.5~~.~~; and

(h) permitted methodologies for determining the *system strength unit price* component of the *system strength charge*, having regard to the following:

(1) the *system strength charge* structure in clause 6A.23.5;

(2) the desirability of providing efficient investment and *system strength transmission service* utilisation signals to actual and potential *System Strength Transmission Service Users* based on the long run cost of providing *system strength transmission services* at the relevant location;

(3) the desirability of consistent pricing structures across the *NEM*; and

(4) the costs and benefits associated with calculating, implementing and applying the methodology; and

(i) principles for determining forecast *annual system strength revenue* and estimated actual *annual system strength revenue.*

6A.26 Prudent discounts

6A.26.1 Agreements for prudent discounts for prescribed transmission services

(a) Subject to this clause 6A.26.1, the prices for *prescribed transmission services* that are determined in accordance with the *pricing methodology* of a *Transmission Network Service Provider*, are the maximum prices that a *Transmission Network Service Provider* is entitled to charge for the provision of the relevant *prescribed transmission services*.

(b) A *Transmission Network Service Provider* may, but is not required to, agree with a *Transmission Customer* (the **beneficiary**) to charge lower prices for *prescribed TUOS services* and *prescribed common transmission services* (other than *system strength transmission services*) provided to that beneficiary, than the prices determined in accordance with the provider's *pricing methodology*.

(c) Where a *Transmission Customer* requests a *Transmission Network Service Provider* to charge that user reduced charges for *prescribed TUOS services* or *prescribed common transmission services* (other than *system strength transmission services*) (**reduced charges**), the *Transmission Network Service Provider* must negotiate in good faith;

(d) Subject to this clause 6A.26.1, a *Transmission Network Service Provider* who agrees to charge a beneficiary reduced charges may recover the difference between the revenue that would be recovered by the application of the maximum prices referred to in paragraph (a) and the reduced charges (the **discount amount**) from *Transmission Customers* through charges for either or both:

(1) the *adjusted non-locational component*; and

(2) *prescribed common transmission services*,

in accordance with the *Co-ordinating Network Service Provider's* or *Transmission Network Service Provider's pricing methodology* (as the case may be).

(e) A *Transmission Network Service Provider* may recover up to 70 per cent of a discount amount through the charges referred to in subparagraphs (d)(1) and (2).

(f) A *Transmission Network Service Provider* may recover greater than 70 percent of the discount amount through either or both the charges referred to in subparagraphs (d)(1) and (2) if;

(1) the discount amount is no larger than that necessary to prevent the charges referred to in subparagraphs (d)(1) and (2) altering the beneficiary's behaviour to the point of adopting the most attractive alternative in place of the course of action the beneficiary would have adopted if no such charges were levied; and

(2) the giving of the discount would not place other customers of the *Transmission Network Service Provider* in a worse position than if the discount was not offered.

(g) Where for any reason the *Transmission Network Service Provider* does not recover the proportion of a discount amount that the *Transmission Network Service Provider* is entitled to recover from other *Transmission Customers* under this clause in the *financial year* in which the reduced charges apply, the *Transmission Network Service Provider* may recover the difference through charges to *Transmission Customers* for the *adjusted non-locational component* of *prescribed TUOS services* to apply in a subsequent *financial year*, in accordance with the *Transmission Network Service Provider's pricing methodology.*

6A.26.2 Application to AER for approval of proposed prudent discount amounts

(a) This clause applies where a *Transmission Network Service Provider* has agreed or proposes to agree, to reduced charges in accordance with clause 6A.26.1 and seeks to recover greater than 70 per cent of the discount amount through the charges referred to in clause 6A.26.1(d) to its other *Transmission Customers* (the **proposed recovery amount**).

(b) A *Transmission Network Service Provider* may apply to the *AER* for approval to recover the proposed recovery amount.

(c) A *Transmission Network Service Provider* seeking approval must submit to the *AER* a written application in accordance with any relevant requirements of the *information guidelines* in force under clause 6A.17.2.

(d) If the *AER* determines that the requirements of clause 6A.26.1(f) are satisfied, the *AER* may approve the recovery of the proposed recovery amount, taking into account the matters referred to in paragraph (i).

(e) If the *AER* determines that the requirements of clause 6A.26.1(f) are not satisfied, the *AER* may refuse the recovery of the proposed recovery amount, and must set out its reasons.

(f) If the *AER* does not make a decision referred to in paragraph (d) or (e) within 60 *business days* from the date it receives the *Transmission Network Service Provider's* application and accompanying evidence under paragraph (c), then, on the expiry of that period, the *AER* is taken to have approved the recovery of the proposed recovery amount.

(g) A *Transmission Network Service Provider* must provide the *AER* with such information as the *AER* requires for the purpose of making a determination under paragraphs (d) or (e) within the time specified by the *AER* in a notice provided to the provider by the *AER* for that purpose.

Consultation

(h) Before making a determination under paragraph (d) or (e), the *AER* may consult with the relevant *Transmission Network Service Provider* and such other persons as the *AER* considers appropriate, on any matters arising out of an application to recover a proposed recovery amount as the *AER* considers appropriate.

Relevant factors

(i) In making a determination under paragraph (d) or (e), the *AER* must take into account:

(1) the matters and proposals set out in the application referred to in paragraph (c);

(2) the requirements of clause 6A.26.1(f); and

(3) any other factors the *AER* considers relevant.

(j) If the *AER* approves or is taken to approve recovery of the proposed recovery amount under paragraph (d) or (f), that approval is valid so long as the agreement between the *Transmission Network Service Provider* and the *Transmission Customer* remains in effect and its terms are not renegotiated, except where the *Transmission Network Service Provider* has provided information in its application that was materially false or misleading.

(k) Where a *Transmission Network Service Provider* agrees to charge reduced charges in accordance with clause 6A.26.1, and no approval is granted under this clause 6A.26.2, the *AER* must review the discount amount in the course of making a subsequent *revenue determination* for that provider, and if the recovery of any part of the discount amount does not comply with clause 6A.26.1(f), the *AER* may adjust (with interest) the *total revenue cap* of the *Transmission Network Service Provider* for the following *regulatory control period* in respect of the total amount that has been earned by the *Transmission Network Service Provider* and does not satisfy the requirements under the *Rules*.

6A.27 Billing Process

This rule describes the manner in which *Transmission Network Users* are billed for *prescribed transmission services* and how payments for those services are made.

6A.27.1 Billing for prescribed transmission services

(a) For each *connection point* on its *transmission network*~~s~~, a *Transmission Network Service Provider* must calculate the:

(1) *transmission service charges payable by Transmission Network Users* in ~~*in*~~ accordance with the *transmission service* prices published under clause 6A.24.2~~.~~; and

(2) *system strength charges* payable by *System Strength Transmission Service Users* in accordance with clause 6A.23.5 and the *system strength unit prices* published under clause 6A.24.2.

(b) A *Transmission Network Service Provider* must issue a bill to *Transmission Network Users* and *System Strength Transmission Service Users* for *prescribed transmission services*.

(c) Where the billing for a particular *financial year* is based on quantities which are undefined until after the commencement of the *financial year*, charges must be estimated from the previous year's billing quantities with a reconciliation to be made when the actual billing quantities are known and, where the previous year's billing quantities are unavailable or no longer suitable, nominated quantities may be used as agreed between the parties.

(d) Where charges are to be determined for *prescribed transmission services* from *metering data*, these charges must be based on kW or kWh obtained from the *metering data* managed by *AEMO*.

6A.27.1A Billing of modified load export charges

This rule does not apply to the process of calculating and billing *modified load export charges*, which is regulated under rule 6A.29A.

6A.27.2 Minimum information to be provided in network service bills

(a) The following is the minimum information that must be provided with a bill for a *connection point* issued by a *Transmission Network Service Provider* directly to a *Transmission Network User* or *System Strength Transmission Service User*:

(1) the *connection point* identifier;

(2) the dates on which the *billing period* starts and ends;

(3) the identifier of the published *transmission service* price from which the *connection point* charges are calculated; and

(4) measured quantities, billed quantities, agreed quantities, prices and amounts charged for each component of the total *transmission service* account.

(b) In addition to the minimum information requirements set out in paragraph (a), a bill for a *connection point* issued by a *Transmission Network Service Provider* directly to a *Transmission Customer* must separately identify, for the total amount levied in relation to *prescribed TUOS services* in the *billing period* for that *connection point* each of the following components:

(1) charges for the *adjusted locational component* and the *adjusted non-locational component* of *prescribed TUOS services*; ~~and~~

(2) charges for *prescribed common transmission services*~~.~~; and

(3) where applicable, *system strength charges*.

(c) In addition to the minimum information requirements in paragraph (a), a bill for a *connection point* issued by a *Transmission Network Service Provider* directly to a *Distribution Network Service Provider* must separately identify the component of *designated pricing proposal services*, if any, to which each amount charged in the bill relates.

(d) In addition to the minimum information requirements in paragraph (a), a bill for a *connection point* issued by a *System Strength Service Provider* directly to a *Distribution Network Service Provider* or *Transmission Network Service Provider* relating to *system strength charges* must separately identify the *system strength charge* by *connection point*.

6A.27.3 Obligation to pay charges for prescribed transmission services

A *Transmission Network User* or *System Strength Transmission Service User* must pay charges for *prescribed transmission services* properly charged to it and billed in accordance with the *pricing methodology* of the relevant *Transmission Network Service Provider* by the date specified in the bill.

6A.27.4 Payments between Transmission Network Service Providers in the same region

(a) A *Transmission Network Service Provider* must pay other *Transmission Network Service Providers* within the same *region* an amount of revenue equal to that which it is estimated it will collect during the following *regulatory year* or *financial year* (as the case may be), as charges for *prescribed transmission services* for the use of *transmission systems* owned by those other *Transmission Network Service Providers*.

(b) The amount of any financial transfer under paragraph (a) must be determined by the relevant *Co-ordinating Network Service Provider* and paid in equal monthly instalments.

(c) **[Deleted]**

6A.27.5 Calculation of financial transfers between Transmission Network Service Providers in the same region

(a) If the *prescribed transmission use of system* revenue allocation and price and charge calculation under the *pricing methodology* of a *Transmission Network Service Provider* result in the allocation of some of a *Transmission Network Service Provider's* revenue to a *Transmission Customer* in relation to a *connection point* with another *Network Service Provider* in the same *region* then financial transfers between *Network Service Providers* must be made in accordance with paragraph (b).

(b) Financial transfers referred to in paragraph (a) must be determined by the *Co-ordinating Network Service Provider* for the relevant *region* as a fixed annual

amount for the next *financial year*. The *survey period* for this allocation is the most recent full *financial year* for which operating data is available.

Schedule 6A.4 Application of this Chapter to AEMO and declared transmission system operators

S6A.4.1 Application of this Chapter to AEMO etc

(a) For the purpose of applying this Chapter, *AEMO* will be regarded as a *Transmission Network Service Provider* providing *shared transmission services*.

(b) However, in the application of this Chapter to *transmission services* provided by means of, or in connection with, the *declared transmission system* of an *adoptive jurisdiction*, a reference to a *Transmission Network Service Provider* is, in relation to the provision of *entry services*, *exit services* or *shared network capability services* to be read as a reference to a *declared transmission system operator*.

S6A.4.2 Exclusions, qualifications and modifications

(a) This Chapter will be read subject to the following exclusions, qualifications and modifications.

(b) **Part A (Introduction)**

Clause 6A.1.4(b) is excluded.

(c) **Part B (Transmission Determinations Generally)**

This Part applies subject to the following exclusions, qualifications and modifications:

Clause 6A.2.2 (Components of transmission determinations):

(1) A *transmission determination* for *AEMO* will not include a *revenue determination*.

(2) However, *AEMO* must have a revenue methodology (which will not be subject to the *AER's* approval) setting out the method for calculating *AEMO's maximum allowed revenue* for the provision of *prescribed transmission services* for each *regulatory year*.

(3) In formulating its revenue methodology, or an amendment to its revenue methodology, *AEMO* must consult with the public.

(4) *AEMO's maximum allowed revenue* consists of:

(i) so much of the aggregate annual revenue requirement of each declared transmission system operator for AEMO's regulatory year as relates to the provision to AEMO of shared network capability services; and

(ii) the other costs forecast to be incurred by *AEMO* in the same *regulatory year* for the provision of *prescribed shared transmission services*.

Note:

The costs under subparagraph (ii) might include the cost of *electricity network services* provided by a *declared transmission system operator* where those services are, from the standpoint of the operator, not *prescribed transmission services*.

(5) The revenue methodology must include a description of:

(i) the categories of costs to be recovered; and

(ii) the method (which must be consistent with the Cost Allocation Principles) for allocating costs to prescribed transmission services and negotiated transmission services; and

(iii) how under and over recovery of revenue in a particular *regulatory year* is to be treated.

(6) The revenue methodology must be consistent with section 52 of the *NEL* and the provisions of Chapter 2 of the *Rules* applicable to *AEMO*.

(7) *AEMO* must comply with its revenue methodology.

(8) Before the commencement of the *regulatory year* to which *AEMO's* revenue methodology applies, *AEMO* must *publish*:

(i) the revenue methodology; and

(ii) a report on how it has applied its revenue methodology for the purpose of determining prices for the ensuing *regulatory year*.

(9) However, for the *regulatory year* commencing on 1 July 2009, *AEMO* may, instead of formulating and publishing its own revenue methodology, adopt as its revenue methodology relevant provisions of the *transmission determination* that would have applied to VENCorp for that *regulatory year* if the legislative and regulatory changes that took effect at the commencement of that *regulatory year* had not been made.

(d) **Part C (Regulation of Revenue – Prescribed Transmission Services)**

This Part is not applicable to *AEMO*.

This Part applies to a *declared transmission system operator* with the following modification of clause 6A.7.1:

If a *declared transmission system operator* is directed by *AEMO*, or is required by or agrees with a *Connection Applicant*, to construct an *augmentation*, clause 6A.7.1 applies as if:

(1) the direction, requirement or agreement were an event in respect of which the *declared transmission system operator* were unconditionally authorised under clause 6A.7.1(a) to apply to the *AER* for revocation and substitution of a *revenue determination*; and

(2) clause 6A.7.1(a)(1) to (7) were inapplicable to an application founded on such an event; and

(3) the following were added after clause 6A.7.1(d):

(da) If a *declared transmission system operator* is directed by *AEMO*, or is required by or agrees with a *Connection Applicant*, to

construct an *augmentation*, and the operator applies to the *AER* for revocation of a *revenue determination* on that ground, the *AER* must revoke the *revenue determination*.

(e) **[Deleted]**

(f) **Part E (Revenue determinations and pricing methodologies)**

Part E applies subject to the following exclusions, qualifications and modifications:

1. Clause 6A.10.1 (Submission of proposal, pricing methodology and information)

   Clause 6A.10.1 applies to *AEMO* as if for paragraphs (a), (b) and (c) the following were substituted:

   (a) *AEMO* must, as and when required by the *AER*, submit to the *AER*:

      (1) a proposed *pricing methodology* relating to *shared transmission services* that are *prescribed TUOS services* or *prescribed common transmission services* (**prescribed shared transmission services**).

      (2) [**Deleted**]

   (b) AEMO's pricing methodology:

      (1) must be designed to recover no more than *AEMO's maximum allowed revenue* for the provision of *prescribed shared transmission services*; and

      (2) must set out the principles on which prices for *prescribed shared transmission services* are to be determined.

   (c) Exact equivalence is not required between the costs of providing a service and the revenue derived from providing the service in a particular *regulatory year* if there are reasonable grounds to believe that costs will over time approximate revenue.

   (ca) [**Deleted**]

1A. Clause 6A.10.1A *AER*'s framework and approach paper)

   Clause 6A.10.1A is not applicable to *AEMO*.

2. **[Deleted]**

3. Clause 6A.11.1 (Preliminary examination and determination of non-compliance with relevant requirements)

   Clause 6A.11.1 applies to *AEMO* only insofar as relevant to a *pricing methodology*.

4. Clause 6A.11.2 (Resubmission of proposal, pricing methodology or information)

   Clause 6A.11.2 applies to *AEMO* only insofar as relevant to a *pricing methodology*.

5. Clause 6A.11.3 (Resubmission of proposal, pricing methodology or information)

   Clause 6A.11.3 applies to *AEMO* only insofar as relevant to a *pricing methodology*.

6. Rule 6A.12 (Draft decision and further consultation)

   This *Rule* applies to *AEMO* only insofar as relevant to a decision on a *pricing methodology*.

7. Rule 6A.13 (Final decision)

   This *Rule* applies to *AEMO* only insofar as relevant to a decision on a *pricing methodology*.

8. Rule 6A.14 (Requirements relating to draft and final decisions)

   (a) This *Rule* applies to *AEMO* only insofar as relevant to a decision on a *pricing methodology*.

   (b) Clause 6A.14.3(e) (which requires the *AER* to approve a *regulatory control period* of 5 *regulatory years*) is inapplicable to *AEMO*.

   Note:

   The *Rule* is thus largely inapplicable. Of clause 6A.14.1 only paragraphs (6), (7) and (8) are applicable. Clause 6A.14.2 requires the *AER* to give reasons setting out the basis and rationale of its decision. This requirement is relevant to a decision on a pricing methodology but the matters of detail mentioned in paragraphs (1) to (4) would, as a general rule, be irrelevant to such a decision. Of clause 6A.14.3 only paragraphs (f) to (i) would be relevant.

9. Rule 6A.15 (Revocation of revenue determination or amendment of pricing methodology for wrong information or error)

   This *Rule* applies to *AEMO* only insofar as relevant to the amendment of a *pricing methodology*.

10. Rule 6A.16 (Miscellaneous)

    This *Rule* applies as if it included the following additional paragraphs:

    (g) *AEMO* must, on or before 15 May in each year, *publish* its prices for *prescribed shared transmission services* for its next *regulatory year*.

    (h) A *declared transmission system operator* must notify *AEMO* of its revenue requirement for the provision of *shared network capability services* for *AEMO's* next *regulatory year* in sufficient time to enable *AEMO* to calculate prices in accordance with the approved *pricing methodology* and meet its obligations under paragraph (g).

(g) **Part F (Information Disclosure)**

This Part is not applicable to *AEMO*.

(h) **Part G (Cost Allocation)**

AEMO's revenue methodology must be consistent with the *Cost Allocation Principles* set out in this Part: see clause S6A.4.2(c)(5). This Part applies to *AEMO* only insofar as it is relevant to that requirement.

(i) **Part H (Transmission Consultation Procedures)**

No exclusions, qualifications or modifications are prescribed.

(j) **Part I (Ring-Fencing Arrangements for Transmission Network Service Providers)**

This Part is not applicable to *AEMO*.

(k) **Part J (Prescribed Transmission Services – Regulation of Pricing)**

Part J applies subject to the following exclusions, qualifications and modifications:

1. Rule 6A.23 (Pricing Principles for Prescribed Transmission Services)

Clause 6A.23.3 applies as if it included the following additional paragraphs:

(g) In relation to the declared transmission system of an adoptive jurisdiction:

(1) *AEMO* is responsible for allocating the *ASRR* for *prescribed TUOS services* and *prescribed common transmission services*; and

(2) the relevant *declared transmission system operator* is responsible for allocating the *ASRR* for *prescribed entry services* and *prescribed exit services*.

(h) A declared transmission system operator must:

(1) allocate costs between *shared network capability services* and *prescribed connection services*; and

(2) notify *AEMO* of its allocation (and the basis on which it was made) in sufficient time to calculate prices for *AEMO's* next *regulatory year* in accordance with its *pricing methodology*; and

(3) provide *AEMO* (as and when requested by *AEMO*) with the information *AEMO* reasonably requires to allocate *ASRR* for *prescribed TUOS services* and *prescribed common transmission services*.

Clause 6A.23.4 applies as if it included the following additional paragraph:

(k) A *declared transmission system operator* is not required to develop separate prices for recovery of the *ASRR* referable to *shared network capability services*.

For clause 6A.23.5, the definition of *system strength charging period* in paragraph (b) is replaced with the following definitions

system strength charging period means, for a *System Strength Service Provider*, the period from the commencement of this

definition until 30 June 2027 and each subsequent period of 5 years except that if a *pricing methodology* of the *System Strength Service Provider* commences at the start of any such period and is in effect for longer than 5 years, the subsequent period ends when that *pricing methodology* ends.

2. Rule 6A.24 (Pricing Methodology)

Clause 6A.24.1 applies as if the following paragraphs were substituted for paragraphs (e) and (f):

(e) Subject to express provisions of the *Rules* to the contrary, a *pricing methodology*:

(1) applies for the duration of the relevant *regulatory control period* (or in the case of the *system strength unit price*, for the relevant *system strength charging period*); and

(2) may not be amended during the *regulatory control period*.

(f) However, the *AER* may, on an application made by *AEMO* during the *regulatory year* commencing on 1 July 2009, amend *AEMO's pricing methodology* as it applies to the setting of prices for the *regulatory year* commencing on 1 July 2010 and later *regulatory years*.

Clause 6A.24.2 applies as if the following sub-paragraphs were substituted for sub-paragraphs (c)(1) and (c)(2):

(1) [deleted]; or

(2) 15 May each year.

3. Clause 6A.26.1 (Agreements for prudent discounts for prescribed transmission services)

Clause 6A.26.1 applies as if:

(1) the power under paragraph (b) to agree to charge lower prices for *prescribed TUOS services* and *prescribed common transmission services* were vested in *AEMO* to the exclusion of the relevant *declared transmission system operator*; and

(2) an additional provision is included that the relevant *declared transmission system operator* must, at the request of *AEMO*, provide to *AEMO* all information *AEMO* reasonably requires for the purpose of considering a proposal for the exercise of that power.

4. Clause 6A.26.2 (Application to *AER* for approval of proposed prudent discount amounts)

(1) Clause 6A.26.2(b) applies as if the word "may" is substituted for "must".

(2) Clause 6A.26.2(k) is not applicable to *AEMO*.

5. Clause 6A.29.1 (Multiple Transmission Network Service Providers within a region)

Clause 6A.29.1 applies as if it included the following additional paragraph:

(g) *AEMO* is (without appointment under clause 6A.29.1(a)) the *Co-ordinating Network Service Provider* for a *region* that includes the whole or the major part of the *declared shared network*.

(l) **[Deleted]**

(m) **Schedule S6A.1 (Contents of Revenue Proposals)**

This Schedule is not applicable to *AEMO*.

(n) **Schedule S6A.2 (Regulatory Asset Base)**

This Schedule is not applicable to *AEMO*.

Clause S6A.2.3(a)(3)(i) is not applicable to a *declared transmission system operator*.

(o) **Schedule S6A.3 (CRNP methodology and modified CRNP methodology)**

This Schedule applies without exclusion, qualification or modification.

CHAPTER 10

10. Glossary

adverse system strength impact

An adverse impact, assessed in accordance with the *system strength impact assessment guidelines*, on the ability under different operating conditions of:

(a) the *power system* to maintain system stability in accordance with clause S5.1a.3; or

(b) a *generating system*, ~~or~~ *market network service facility* or *inverter based load* forming part of the *power system* to maintain stable operation including following any *credible contingency event* or *protected event*,

so as to maintain the power system in a *secure operating state*.

AEMO advisory matter

A matter that relates to *AEMO*'s functions under the *NEL* and a matter in which *AEMO* has a role under clause 5.3.4B or in schedules 5.1a, 5.1, 5.2, 5.3 and 5.3a. Advice on the acceptability of *negotiated access standards* under the following clauses are deemed to be *AEMO advisory matters*: S5.1.9, S5.2.5.1, S5.2.5.3 to S5.2.5.5, S5.2.5.7 to S5.2.5.16, S5.3.11, S5.3a.7~~S5.2.5.14~~, S5.2.6.1, S5.2.6.2, S5.3a.4.1 and S5.3a.14.

annual system strength revenue

For a *System Strength Service Provider*, the total amount of the *system strength charges* paid to the *System Strength Service Provider* in respect of *system strength transmission services* provided in a *regulatory year*.

available fault level

Has the meaning given in the *system strength impact assessment guidelines*.

enable

A *market ancillary service* is enabled when *AEMO* has selected the relevant *generating unit* or *load* for the provision of the *market ancillary service* and has notified the relevant *Market Participant* accordingly.

An *inertia network service* is enabled when *AEMO* has selected the relevant *inertia network service* and the service is providing *inertia* to an *inertia sub-network*.

An activity approved by *AEMO* under clause 5.20B.5(a) is enabled when *AEMO* has selected the relevant activity and the activity is performing and available in accordance with any conditions of that approval.

A *system strength service* is enabled when *AEMO* has selected the relevant *system strength service* and the service is contributing to the *three phase fault level* at the relevant *system strength node*~~*fault level node*~~.

~~***fault level node***~~

~~A location on a *transmission network* that *AEMO* determines is a *fault level node* in its determination of *system strength requirements* under clause 5.20C.1(a).~~

~~***fault level shortfall***~~

~~A shortfall in the *three phase fault level* typically provided at a *fault level node* in a *region* (having regard to typical patterns of *dispatched generation*in *central dispatch*) compared to the minimum *three phase fault level* most recently determined by *AEMO* for the *fault level node*.~~

~~***fault level shortfall event***~~

~~A *Transmission Network Service Provider* is required to make *system strength services* available under clause 5.20C.3 as a consequence of an assessment by *AEMO* under clause 5.20C.2(c) that there is a *fault level shortfall* at a *fault level node* in a *region* for which the *Transmission Network Service Provider* is the *System Strength Service Provider* or to cease making *system strength services* available under clause 5.20C.3 as a consequence of an assessment by *AEMO* under clause 5.20C.2(d) that a *fault level shortfall* at a *fault level node* has ceased and:~~

~~(a) the *Transmission Network Service Provider* is required to provide, or cease providing, *system strength services* during the course of a *regulatory control period*; and~~

~~(b) making *system strength services* available or ceasing to make *system strength services* available *materially* increases or *materially* decreases the *Transmission Network Service Provider's* costs of providing *prescribed transmission services*.~~

general system strength impact

In relation to a new *connection* or an alteration to a *generating system* or other *connected plant*, the amount equal to its *adverse system strength impact* as well as any additional amount by which it reduces the *available fault level* at the *connection point* for the new *connection* or *connected plant*, assessed in accordance with the *system strength impact assessment guidelines*.

inverter based load

A *load* that is supplied by power electronics, including inverters, and potentially susceptible to inverter control instability, and that is classified as an *inverter based load* applying criteria specified in the *system strength impact assessment guidelines*.

inverter based resource

Asynchronous generating units and *inverter based load*.

large inverter based resource

An *inverter based resource* classified as a *large inverter based resource* applying criteria specified in the *system strength impact assessment guidelines*.

negotiated transmission service

Any of the following services:

(a) a *shared transmission service* that:

(1) exceeds the *network* performance requirements (whether as to quality or quantity) (if any) as that *shared transmission service* is required to meet under any *jurisdictional electricity legislation*; or

(2) except to the extent that the *network* performance requirements which that *shared transmission service* is required to meet are prescribed under any *jurisdictional electricity legislation*, exceeds or does not meet the *network* performance requirements (whether as to quality or quantity) as are set out in schedule 5.1a or 5.1;

(b) *connection services* that are provided to serve a *Transmission Network User*, or group of *Transmission Network Users*, at a *single transmission network connection point*, other than *connection services* that are provided by one *Network Service Provider* to another *Network Service Provider* to *connect* their *networks* where neither of the *Network Service Providers* is a *Market Network Service Provider*;

(c) services specified to be *negotiated transmission services* under rule 5.2A.4; or

(d) undertaking *system strength connection works*,

but does not include an *above-standard system shared transmission service*, ~~or~~ a *market network service* or a *system strength transmission service*.

network support event

(a) If, at the end of a *regulatory year* of a *regulatory control period*, the amount of *network support payments* made by a *Transmission Network Service Provider* for that previous *regulatory year* is higher or lower than the amount of the *network support payment allowance* (if any) for the *Transmission Network Service Provider* for that previous *regulatory year*, this constitutes a *network support event*.

(b) In calculating the amount for the purposes of a *network support event* referred to in paragraph (a), the amount of *network support payments* made by a *Transmission Network Service Provider* must not include an amount of *network support payments* that are a substitute for a *network augmentation* where an allowance for capital expenditure in relation to that *network augmentation* has been provided for in the *revenue determination* or an *approved pass through amount* arising from an *inertia shortfall event* ~~or a *fault level shortfall event*~~.

network support payment allowance

The amount of *network support payments* (if any) that is provided for a *Transmission Network Service Provider* for a *regulatory year* in:

(a) the *annual building block revenue requirement* for the *Transmission Network Service Provider* for that *regulatory year*; or

(b) any *approved pass through amount* for the *Transmission Network Service Provider* for that *regulatory year* arising from an *inertia shortfall event* ~~or a *fault level shortfall event*~~,

less the amount (expressed as a positive) of avoided *network support payments* (if any) that is provided for in any *required pass through amount* for the *Transmission Network Service Provider* for that *regulatory year* arising from an *inertia shortfall event* ~~or a *fault level shortfall event*~~.

NSCAS need

(a) Subject to paragraphs (b) and (c), *NSCAS* required to:

(1) maintain *power system security* and reliability of *supply* of the *transmission network* in accordance with the *power system security standards* and the *reliability standard*; and

(2) maintain or increase the *power transfer capability* of that *transmission network* so as to maximise the present value of net economic benefit to all those who produce, consume or transport electricity in the *market*.

(b) Any requirement for a service that satisfies paragraph (a) and is also capable of being made available as an *inertia network service* to address an *inertia shortfall* through the arrangements in rule 5.20B must be treated as an *inertia shortfall* and is not an *NSCAS need*.

(c) Any requirement for a service that satisfies paragraph (a) and is also capable of being made available as a *system strength service* ~~to address a *fault level shortfall* through the arrangements in rule 5.20C must be treated as a *fault level shortfall* and~~ is not an *NSCAS need*.

prescribed common transmission services

System strength transmission services and *prescribed* ~~*Prescribed*~~ *transmission services* that provide equivalent benefits to:

(a) all *Transmission Customers* who have a *connection point* with the relevant *transmission network* without any differentiation based on their location within the *transmission system*; and

(b) *Transmission Network Service Providers* in *interconnected regions*, without any differentiation based on the location of their direct or indirect *connection* or *interconnection* with the relevant *transmission system*.

prescribed transmission service

Any of the following services:

(a) a *shared transmission service* that:

(1) does not exceed such *network* performance requirements (whether as to quality or quantity) as that *shared transmission service* is required to meet under any *jurisdictional electricity legislation*;

(2) except to the extent that the *network* performance requirements which that *shared transmission service* is required to meet are prescribed under any *jurisdictional electricity legislation*, does not exceed such *network* performance requirements (whether as to quality or quantity) as are set out in schedule 5.1a or 5.1; or

(3) is an *above-standard system shared transmission service*;

(b) services that are required to be provided by a *Transmission Network Service Provider* under the *Rules*, or in accordance with *jurisdictional electricity legislation*, to the extent such services relate to the provision of the services referred to in paragraph (a), including such of those services as are :

(1) required by *AEMO* to be provided under the *Rules*, but excluding those acquired by *AEMO* under rule 3.11; and

(2) necessary to ensure the integrity of a *transmission network*, including through the maintenance of *power system security* and assisting in the planning of the *power system*; ~~or~~

(c) *connection services* that are provided by a *Transmission Network Service Provider* to another *Network Service Provider* to connect their *networks* where neither of the *Network Service Providers* is a *Market Network Service Provider*; or~~,~~

(d) *system strength transmission services*,

but does not include a *negotiated transmission service* or a *market network service*.

prescribed TUOS services or prescribed transmission use of system services~~;~~

Prescribed transmission services that are not *prescribed common transmission services*, *prescribed entry services* or *prescribed exit services*, and that provide specific benefits to:

(a) *Transmission Customers* who have a *connection point* with the relevant *transmission network*, based on the location of that *connection point* within the *transmission system*; and

(b) *Transmission Network Service Providers* who have a direct or indirect *connection* or an *interconnection* with the relevant *transmission network*, based on the location of that *connection* or *interconnection* within the relevant *transmission system*.

regulatory control period

(a) In respect of a *Transmission Network Service Provider*, a period of not less than 5 *regulatory years* in which a *total revenue cap* applies to that provider by virtue of a *revenue determination*.

(b) In respect of a *Distribution Network Service Provider*, a period of not less than 5 *regulatory years* for which the provider is subject to a control mechanism imposed by a distribution determination.

(c) In respect of *AEMO*, a period over which its approved *pricing methodology* applies.

short circuit ratio

For a *connection point* for *plant*, the synchronous *three phase fault level* (expressed in MVA) at the *connection point* for the *plant* divided by:

(a) in the case of a *generating system*, its *rated active power* (expressed in MW);

(b) in the case of a *market network service facility*, its rated *power transfer capability* (expressed in MW); and

(c) in the case of an *inverter based load*, its *maximum demand* at the *connection point* (expressed in MW),

to avoid doubt, in each case excluding any *fault current contribution* from the *plant* side of the *connection point* when calculating the *three phase fault level*.

For the purpose of clauses S5.2.5.15(b), S5.3.11(b) and S5.3a.7(b), the *short circuit ratio* must be assessed in accordance with the methodology prescribed in the *system strength impact assessment guidelines*.

system strength charge

The charge determined by a *System Strength Service Provider* in accordance with clause 6A.23.5.

system strength charging period

Has the meaning given in clause 6A.23.5(b).

system strength connection point

A *connection point* for a *connection* or an alteration to a *generating system* or other *connected plant* in respect of which an election is made under clause 5.3.4B(b1) to pay the *system strength charge*.

system strength connection works

Investment in a *transmission system* or *distribution system* in order to remedy or avoid a *general system strength impact* ~~an *adverse system strength impact*~~ arising from establishing a *connection* or from alteration to a *generating system* or other *connected plant*~~a *connection* for a *generating system* or *market network service facility* or from any alteration to a *generating system* to which clause 5.3.9 applies~~.

system strength generating unit

A *generating unit* registered with *AEMO* under clause 5.20C.4(b).

system strength impact assessment

Power system studies to assess the *general system strength impact* of a *connection* or alteration to a *generating system* or other *connected plant*.

~~*Power system* studies to assess the impact of the *connection* of a new *generating system* or *market network service facility* or of any proposed alteration to a *generating system* to which clause 5.3.9 applies on the ability under different operating conditions of:~~

~~(a) the *power system* to maintain system stability in accordance with clause S5.1a.3; and~~

~~(b) *generating systems* and *market network service facilities* forming part of the *power system* to maintain stable operation including following any *credible contingency event* or *protected event*,~~

~~so as to maintain the *power system* in a *secure operating state*.~~

system strength impact assessment guidelines

The guidelines ~~for conducting *system strength impact assessments*~~ developed by *AEMO* under clause 4.6.6.

system strength locational factor

A *system strength locational factor* determined by a *Network Service Provider* in accordance with the *system strength impact assessment guidelines*.

system strength node

A location on a *transmission network* that *AEMO* declares is a *system strength node* under clause 5.20C.1(a).

system strength quantity

Has the meaning given to it in clause 6A.23.5(j).

system strength remediation scheme

A scheme agreed or determined under clause 5.3.4B required to be implemented as a condition of a *connection agreement* to remedy or avoid a *general system strength impact*~~an adverse system strength impact~~.

System Strength Report

A report published by *AEMO* under clause 5.20.7.

system strength requirements

The matters determined by *AEMO* for a *system strength node* under clause 5.20C.1(c).

~~***system strength requirements***~~

~~The matters determined by *AEMO* for a *region* under clause 5.20C.1(a).~~

system strength requirements methodology

The process *AEMO* uses to determine the *system strength requirements* for each *system strength node* published ~~*region published*~~ by *AEMO* under clause 5.20.6(a).

system strength service

A service for the provision of a contribution to achieving the standard in clause S5.1.14 in relation to a *system strength node*~~three phase fault level at a fault level node~~.

system strength service payment

A payment by a *Transmission Network Service Provider* made under a *system strength services agreement* where:

(a) the payment is made for *system strength services* to be made available or provided as a service to the *Transmission Network Service Provider* in its capacity as a *System Strength Service Provider* to satisfy an obligation under clause S5.1.14~~clause 5.20C.3~~; and

(b) the *system strength services* are made available or provided in accordance with applicable technical specifications and performance standards ~~approved by *AEMO*~~.

System Strength Service Provider

The *System Strength Service Provider* for a *region* as specified under clause 5.20C.3(a).

system strength services agreement

An agreement made under which a person agrees to provide one or more *system strength services* to a *System Strength Service Provider*.

system strength transmission service

The provision of *facilities* and services to meet the standard in clause S5.1.14 at *system strength nodes*.

System Strength Transmission Service User

Each:

(a) *Transmission Network User* in respect of its *system strength connection points*; and

(b) *Network Service Provider* whose *network* is *connected* to the *transmission network* of a *System Strength Service Provider* and whose *network* includes any *system strength connection points*.

system strength unit price

The price determined by a *System Strength Service Provider* for a *system strength node* in accordance with its *pricing methodology*.

CHAPTER 11

11. Savings and Transitional Rules

Part ZZZZS Efficient management of system strength on the power system

11.143 Rules consequential on the making of the National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021

11.143.1 Definitions

(a) For the purposes of this rule 11.143:

Amending Rule means the *National Electricity Amendment (Efficient management of system strength on the power system) Rule 2021*.

applicable TNSP means TransGrid, ElectraNet, AusNet Services, Powerlink, TasNetworks and AusGrid.

Ausgrid means Ausgrid Operator Partnership ABN 78 508 211 731.

AusNet Services means AusNet Transmission Group Pty Ltd ABN 78 079 798 173.

commencement date means the date of commencement of Schedules 3, 4, 5, 6, 7 and 8 of the Amending Rule.

current regulatory control period means, for a *System Strength Service Provider*, its *regulatory control period* in which the transitional rule commencement date falls.

effective date means the date of commencement of Schedules 1, 2 and 9 of the Amending Rule.

ElectraNet means ElectraNet Pty Ltd ABN 41 094 482 416.

Existing Application To Connect has the meaning given in clause 11.143.9(a)(1) or clause 11.143.9A(a)(1), as applicable.

Existing Connection Enquiry has the meaning given in clause 11.143.8(a)(1).

Existing Connection Agreement means a *connection agreement* entered into before the commencement date.

fault level shortfall means a shortfall in the *three phase fault level* typically provided at a *system strength node* in a *region* (having regard to typical patterns of *dispatched generation* in *central dispatch*) compared to the minimum *three phase fault level* most recently determined by *AEMO* for the *system strength node* in the *system strength requirements*.

fault level shortfall event means a *Transmission Network Service Provider* is required to:

(1) make *system strength services* available under clause 11.143.15 during the system strength transition period as a consequence of an assessment by *AEMO* under clause 11.143.14(b) that there is a *fault level shortfall*

at a *system strength node* in a *region* for which the *Transmission Network Service Provider* is the *System Strength Service Provider*; or

(2) cease making *system strength services* available under clause 11.143.15 during the system strength transition period as a consequence of an assessment by *AEMO* under clause 11.143.14(e) that a *fault level shortfall* at a *system strength node* has ceased,

where:

(3) the *Transmission Network Service Provider* is required to provide, or cease providing, *system strength services* during the course of its *regulatory control period*; and

(4) making *system strength services* available or ceasing to make *system strength services* available materially increases or materially decreases the *Transmission Network Service Provider's* costs of providing *prescribed transmission services*.

former Chapter 5 means Chapter 5 of the *Rules* as in force immediately prior to the commencement date.

former Chapter 5A means Chapter 5A of the *Rules* as in force immediately prior to the commencement date.

former clause 5.20C.2(c) means clause 5.20C.2(c) as in force immediately before the effective date.

former clause 5.20C.3 means clause 5.20C.3 as in force immediately before the effective date.

new Chapter 5 means Chapter 5 of the *Rules* as it will be in force on and from the commencement date.

new Chapter 5A means Chapter 5A of the *Rules* as it will be in force on and from the commencement date.

new Chapter 6A means Chapter 6A of the *Rules* as it will be in force on and from the effective date.

new Chapter 10 means Chapter 10 of the *Rules* as it will be in force on and from the commencement date.

new clause 4.6.6 means clause 4.6.6 as it will be in force on and from the commencement date.

new clause 5.3.3(b5)(3) means clause 5.3.3(b5)(3) as it will be in force on and from the commencement date.

new clause 5.3.4B means clause 5.3.4B as it will be in force on and from the commencement date.

new clause 5.3.4C means clause 5.3.4C as it will be in force on and from the commencement date.

n**ew clause 5.12.2(c)(13)** means clause 5.12.2(c)(13) as it will be in force on and from the commencement date.

new clause 5.16.3(a) means clause 5.16.3(a) as it will be in force on and from the effective date.

new clause 5.16.4 means clause 5.16.4 as it will be in force on and from the effective date.

new clause 5.20.6 means clause 5.20.6 as it will be in force on and from the effective date.

new clause 5.20.7 means clause 5.20.7 as it will be in force on and from the effective date.

new clause 5.20C.1 means clause 5.20C.1 as it will be in force on and from the effective date.

new clause 5.20C.1(a) means clause 5.20C.1(a) as it will be in force on and from the effective date.

new clause 5.20C.1(b) means clause 5.20C.1(b) as it will be in force on and from the effective date.

new clause 5.20C.1(c) means clause 5.20C.1(c) as it will be in force on and from the effective date.

new clause 5.20C.3(e) means clause 5.20C.3(e) as it will be in force on and from the effective date.

new clause 5.20C.3(f) means clause 5.20C.3(f) as it will be in force on and from the effective date.

new clause 5.20C.4 means clause 5.20C.4 as it will be in force on and from the effective date.

new clause 5A.A.2(a1) means clause 5A.A.2(a1) as it will be in force on and from the effective date.

new clause S5.1.14 means clause S5.1.14 as it will be in force on and from the effective date.

new clause S5.2.5.15 means clause S5.2.5.15 as it will be in force on and from the commencement date.

new clause S5.2.5.16 means clause S5.2.5.16 as it will be in force on and from the commencement date.

new clause 6.18.2 means clause 6.18.2 as it will be in force on and from the commencement date.

new clause 6A.7.3(a1) means clause 6A.7.3(a1) as it will be in force on and from the effective date.

new clause 6A.25.2 means clause 6A.25.2 as it will be in force on and from the commencement date.

new Schedule 5.8(q) means Schedule 5.8(q) of the *Rules* as it will be in force on and from the effective date.

Powerlink means Queensland Electricity Transmission Corporation Limited ABN 82 078 849 233.

proposed amended pricing methodology means proposed amendments to the *pricing methodology* by a *Transmission Network Service Provider* as referred to in clause 11.143.5(a)(1) or clause 11.143.5(b)(1), as applicable.

subsequent regulatory control period means, for a *System Strength Service Provider*, its *regulatory control period* commencing at the end of its current regulatory control period.

system strength project means *network* investment undertaken by a *System Strength Service Provider* to satisfy its obligations under new clause S5.1.14 in relation to one or more *system strength nodes* where the forecast of the total capital expenditure for the relevant project:

(1) is not otherwise provided for (either in part or in whole) in the total of the forecast capital expenditure for the subsequent regulatory control period of the *System Strength Service Provider*; and

(2) exceeds either $30 million or 5% of the value of the *maximum allowed revenue* for the relevant *System Strength Service Provider* for the first year of the subsequent regulatory control period whichever is the larger amount.

system strength transition period means the period from the effective date to 1 December 2025.

TasNetworks means Tasmanian Networks Pty Ltd ABN 24 167 357 299.

TransGrid means TransGrid Services Pty Ltd as trustee for TransGrid Services Trust ABN 94 121 353 950.

transitional rules commencement date means the date of commencement of Schedule 10 of the Amending Rule.

(b) Italicised terms used in this rule 11.143 have the same meaning as in new Chapter 10.

11.143.2 Publication of initial documents

(a) By 1 December 2022, *AEMO* must amend and publish the *system strength requirements methodology* under new clause 5.20.6 to take into account the Amending Rule.

(b) By 1 December 2022, *AEMO* must publish the first *System Strength Report* under new clause 5.20.7, which includes the *system strength requirements* that *AEMO* has determined in accordance with new clause 5.20C.1.

(c) By 1 December 2022, *AEMO* must amend and publish the *system strength impact assessment guidelines* under new clause 4.6.6 to take into account the Amending Rule.

11.143.3 Declaration of system strength nodes and meeting the standard

(a) At the effective date, any existing *fault level nodes* are deemed to be *system strength nodes*.

(b) The new *Rules* apply to a *system strength node* deemed under paragraph (a) as if it were declared as a new *system strength node* under new clause 5.20C.1(a) on the effective date.

11.143.4 Amendments to pricing methodology guidelines

(a) By no later than 31 August 2022, the *AER* must amend and *publish* the *pricing methodology guidelines* under new clause 6A.25.2 to take into account the Amending Rule.

11.143.5 Amendments to pricing methodologies of TNSPs

(a) By no later than 30 November 2022, each applicable TNSP must:

(1) make proposed changes to its *pricing methodology* to take into account the Amending Rule and the requirements of the revised *pricing methodology guidelines* made by the *AER* pursuant to clause 11.143.4(a) ("**proposed amended pricing methodology**"); and

(2) submit the proposed amended pricing methodology to the *AER*.

(b) Despite clause S6A.4.2(f)1(a), by no later than 30 November 2022, *AEMO* must:

(1) make proposed changes to its *pricing methodology* to take into account the Amending Rule and the requirements of the revised *pricing methodology guidelines* made by the *AER* pursuant to clause 11.143.4(a) ("**proposed amended pricing methodology**"); and

(2) submit the proposed amended pricing methodology to the *AER*.

(c) Despite the date referred to in paragraph (a) or (b) (as applicable), each applicable TNSP and *AEMO* must use its best endeavours to submit its proposed amended pricing methodology as soon as practicable after the *AER* has published its amended *pricing methodology guidelines* pursuant to clause 11.143.4(a).

(d) All references in clauses 6A.11.1, 6A.11.2, 6A.14.3(g) and 6A.14.3(h) to the "proposed *pricing methodology*" apply to the proposed amended pricing methodology submitted in accordance with subparagraph (a)(2) or (b)(2) (as applicable).

(e) Clause 6A.11.3 does not apply to a proposed amended pricing methodology.

(f) Despite anything else in the *Rules*, the *AER* and each applicable TNSP, and the *AER* and *AEMO*, must cooperate with each other so that by no later than 31 January 2023, the *AER* must *publish*:

(1) notice of the making of the final decision on the proposed amended pricing methodology submitted in accordance with paragraph (a)(2) or (b)(2) (as applicable); and

(2) the final decision on the proposed amended pricing methodology, including the reasons required to be included in it.

(g) Despite clause 6A.24.1(e), clause 6A.24.1(f) and item 2 in clause S6A.4.2(k), a proposed amended pricing methodology that is approved by the *AER* will be deemed to be the *pricing methodology* for each applicable TNSP or *AEMO* (as applicable) from the date of its approval by the *AER*.

(h) For the avoidance of doubt, TransGrid and ElectraNet must each submit a proposed *pricing methodology* to the *AER* by 31 January 2022, pursuant to clause 6A.10.1(a), in respect of their respective *regulatory control periods*

commencing on 1 July 2023, and must also submit a proposed amended pricing methodology by 30 November 2022 in accordance with paragraph (b).

(i) TasNetworks and Ausgrid must each comply with the requirements of the Amending Rule and the requirements of the revised *pricing methodology guidelines* made by the *AER* pursuant to clause 11.143.4(a) when submitting a proposed *pricing methodology* to the *AER* pursuant to clause 6A.10.1(a) in respect of their respective *regulatory control periods* commencing on 1 July 2024.

11.143.6 Commencement of system strength charge

(a) Each *System Strength Service Provider* that is required to publish prices for each of the *categories of prescribed transmission services* under clause 6A.24.2(c) by 15 March 2023 must include its *system strength unit prices* for *system strength charges*.

(b) *AEMO* must, by 15 March 2023, publish its *system strength unit prices* for *system strength charges* applicable for the remainder of the *regulatory year* in which the commencement date falls.

11.143.7 Application to distribution network service provider pricing proposal

(a) A *Distribution Network Service Provider* must comply with the requirements of the Amending Rule when submitting an annual *pricing proposal* or initial *pricing proposal* (as applicable) by the relevant date required under new clause 6.18.2 in respect of its *regulatory year* in which the commencement date falls.

11.143.8 Application of the Amending Rule to existing connection enquiries

(a) This clause applies where, before the commencement date, a *Connection Applicant* has, in respect of *plant* that the *Connection Applicant* proposes to *connect*:

(1) made a *connection* enquiry in accordance with clause 5.3.2 (**Existing Connection Enquiry**); and

(2) not made an application to connect to a *Network Service Provider* under clause 5.3.4.

(b) On and from the commencement date:

(1) new Chapter 5 applies for the purposes of determining the *access standards* that apply to the *plant* that the *Connection Applicant* proposes to *connect*;

(2) the Existing Connection Enquiry will be taken to be a *connection* enquiry under the new Chapter 5 with respect to the proposed *plant*; and

(3) the *Network Service Provider* must:

(i) within 10 *business days* after the commencement date, use its reasonable endeavours to provide written notification to the relevant *Connection Applicant* that the Existing Connection Enquiry will be treated as a *connection* enquiry under the new Chapter 5; and

(ii) within 20 *business days* after providing the written notification in subparagraph (3)(i), in consultation with *AEMO* and where necessary, provide each *Connection Applicant* notified under subparagraph (3)(i) with:

(A) any further information required under clause 5.3.3 of the new Chapter 5 relevant to the proposed *plant*; and

(B) written notice of any further information or data to be provided by the *Connection Applicant* to the *Network Service Provider*, to enable the *Connection Applicant* to submit an *application to connect* in accordance with the new Chapter 5 with respect to the proposed *plant*.

(c) Where the *Network Service Provider* has charged the *Connection Applicant* any fees or charges with respect to the Existing Connection Enquiry, the *Network Service Provider* must not charge the *Connection Applicant* any additional fees or charges on or from the commencement date with respect to such Existing Connection Enquiry, except to the extent necessary to cover the reasonable costs of work required to notify the *Connection Applicant* and provide any relevant information under paragraph (b)(3)(ii). For the avoidance of doubt, this clause does not preclude a *Network Service Provider* recovering an application fee from the *Connection Applicant* under clause 5.3.4(b).

11.143.9 Application of the Amending Rule to existing applications to connect under Chapter 5

(a) This clause applies where, before the commencement date, a *Connection Applicant* has, in respect of *plant* that the *Connection Applicant* proposes to *connect*:

(1) made an *application to connect* to a *Network Service Provider* in accordance with clause 5.3.4 (**Existing Application To Connect**); and

(2) not received an offer to *connect* from the relevant *Network Service Provider* in respect of the Existing Application To Connect.

(b) Subject to paragraph (c), on and from the commencement date:

(1) former Chapter 5 applies for the purposes of determining the *access standards* that apply to the *plant* that the *Connection Applicant* proposes to *connect*;

(2) the Existing Application To Connect will be taken to be an *application to connect* under the new Chapter 5 with respect to the proposed *plant*; and

(3) the *Network Service Provider* must, within 10 *business days* after the commencement date, use its reasonable endeavours to provide written notification to the relevant *Connection Applicant* that, notwithstanding the commencement of new Chapter 5, former Chapter 5 continues to apply to the Existing Application To Connect for the purposes of determining the *access standards* that apply to the *plant* that the *Connection Applicant* proposes to *connect.*

(c) Despite the application of paragraph (b), a *Connection Applicant* may, in response to a *Network Service Provider's* notification under paragraph (b)(3), provide written notification to the relevant *Network Service Provider* that the *Connection Applicant* elects for new Chapter 5 to apply to its Existing Application to Connect instead of former Chapter 5.

(d) If a *Connection Applicant* makes an election under paragraph (c), the Existing Application To Connect be will be treated as an *application to connect* under new Chapter 5 and the *Rules* as amended by the Amending Rule apply to the Existing Application to Connect and the parties must comply with paragraphs (e) to (i).

(e) Within 30 *business days* of receiving the written notification from a *Connection Applicant* under paragraph (c), the *Network Service Provider* must, in consultation with *AEMO*, and where necessary, provide the *Connection Applicant* with any further information required under the new Chapter 5 relevant to the proposed *plant*, including:

(1) for each technical requirement, written details of the *minimum access standards* and *negotiated access standards* that are *AEMO advisory matters*;

(2) written notice of any further information to be provided by the *Connection Applicant* (which may include information required to be provided under clauses 5.2.5(d) and (e) and Schedule 5.5);

(3) the information required under new clause 5.3.3(b5)(3);

(4) written notice of any further information to be provided by the *Connection Applicant* in order for the *Network Service Provider* to comply with its obligations under new clause 5.3.4B and new clause 5.3.4C,

such that the *Network Service Provider* can prepare an offer to *connect* in accordance with the new Chapter 5 with respect to the proposed *plant*.

(f) Where paragraphs (c) to (e) apply, and the *Network Service Provider* has charged the *Connection Applicant* any fees or charges with respect to the Existing Application To Connect, the *Network Service Provider* must not charge the *Connection Applicant* any additional fees or charges on or from the commencement date with respect to an Existing Application To Connect, except to the extent necessary to cover the reasonable costs of work required for the *Network Service Provider* to prepare an offer to *connect* in accordance with the new Chapter 5, including the requirements to notify the *Connection Applicant* and provide any relevant information under paragraph (e).

(g) A *Network Service Provider* to which paragraphs (c) to (f) apply, may extend the time period referred to in clause 5.3.6(a) to reasonably allow for any additional time taken in excess of the period allowed in the *preliminary program* that is necessary to take account of the differences between former Chapter 5 and new Chapter 5.

11.143.9A Application of the Amending Rule to existing applications to connect under Chapter 5A

(a) This clause applies where, before the commencement date, a *connection applicant* has, in relation to the provision of a *connection service* in respect of a *large inverter based resource*:

(1) made an *application to connect* to a *Network Service Provider* in accordance with former Chapter 5A (**Existing Application To Connect**); and

(2) not received a *connection offer* from the relevant *Network Service Provider* in respect of the Existing Application To Connect.

(b) Despite new clause 5A.A.2(a1), on and from the commencement date:

(1) new Chapter 5A applies for the purposes of determining the Existing Application To Connect; and

(2) the Existing Application To Connect will be taken to be an *application to connect* under the new Chapter 5A with respect to the proposed *plant*.

11.143.10 Application of the Amending Rule to existing offers to connect

(a) This clause applies where, before the commencement date, a *Connection Applicant* under former Chapter 5:

(1) has received an offer to *connect* from the relevant *Network Service Provider* in respect of an *application to connect*; and

(2) has not entered into a *connection agreement* with the relevant *Network Service Provider* in respect of that *application to connect*.

(b) This clause also applies where, before the commencement date, a *connection applicant* under former Chapter 5A:

(1) has received a *connection offer* from the relevant *Distribution Network Service Provider* in respect of a *connection application*; and

(2) has not entered into a *connection agreement* with the relevant *Distribution Network Service Provider* in respect of that *connection application*.

(c) On and from the commencement date, the *Rules* as amended by the Amending Rule do not apply in relation to the offer to *connect* or *connection offer* (as applicable) and former Chapter 5 or former Chapter 5A (as applicable) applies to *connection* of the *plant* that the applicant proposes to *connect* under that offer to *connect* or *connection offer* (as applicable).

11.143.11 Application of the Amending Rule to Existing Connection Agreements

(a) The Amending Rule is neither intended to, nor to be read or construed as having, the effect of:

(1) altering the terms of an Existing Connection Agreement;

(2) altering the contractual rights or obligations of any of the parties under an Existing Connection Agreement; or

(3) relieving the parties under any such Existing Connection Agreement of their contractual obligations under such an agreement.

(b) Subject to paragraph (c), if, after the commencement date, a *Generator* who has entered into an Existing Connection Agreement is required, in accordance with the *Rules*, to amend any of the *performance standards* set out in that Existing Connection Agreement, then new Chapter 5 applies for the purposes of amending such *performance standards*.

(c) Notwithstanding any other provision of the *Rules*, new clause S5.2.5.15 and new clause S5.2.5.16 do not apply to a *Generator* who, after the commencement date, proposes to alter its *generating system* and has advised *AEMO* in accordance with clause 5.3.9, unless *AEMO*, the *Generator* and the relevant *Network Service Provider* agree to apply new clause 5.2.5.15 or new clause 5.2.5.16.

(d) The Amending Rule is neither intended to have, nor is it to be read or construed as having, the effect of changing the application of clause 11.6.11 (if applicable) in relation to *connection services* provided under an Existing Connection Agreement.

11.143.12 Annual planning reports

(a) A *Transmission Network Service Provider* who is a *System Strength Service Provider* is not required to comply with new clause 5.12.2(c)(13) and new clause 5.20C.3(f) until 31 October 2023.

(b) For the avoidance of doubt, by 31 October 2023, each *Transmission Network Service Provider* must publish the first *Transmission Annual Planning Report* that complies with new clause 5.12.2(c)(13) and new clause 5.20C.3(f).

(c) By the date required under clause 5.13.2(a) in the year 2023, a *Distribution Network Service Provider* must publish the first *Distribution Annual Planning Report* that complies with new Schedule 5.8(q).

11.143.13 System strength services for existing fault level shortfalls in the system strength transition period

(a) A *System Strength Service Provider* who, immediately before the effective date, was required to make *system strength services* available under former clause 5.20C.3:

(1) subject to paragraph (b), must continue to comply with that obligation on and from the effective date in accordance with clause 11.143.15 as if the notice under former clause 5.20C.2(c) were a notice under clause 11.143.14(d); and

(2) may include the cost of *system strength service payments* in the calculation of *network support payments* in accordance with new Chapter 6A.

(b) The obligation of a *System Strength Service Provider* under paragraph (a) to make *system strength services* available expires at the end of the system strength transition period.

11.143.14 Fault level shortfalls determinations in the system strength transition period

(a) This clause (other than paragraph (f)) applies during the system strength transition period. Paragraph (f) continues to apply after the end of the system strength transition period.

(b) *AEMO* must as soon as practicable following its determination of the *system strength requirements* under new clause 5.20C.1 assess:

(1) the *three phase fault level* typically provided at each *system strength node* in each *region* having regard to typical patterns of *dispatched generation* in *central dispatch*;

(2) whether in *AEMO's* reasonable opinion, there is or is likely to be a *fault level shortfall* in the *region* during the system strength transition period and *AEMO's* forecast of the period over which the *fault level shortfall* will exist; and

(3) where *AEMO* has previously assessed that there was or was likely to be a *fault level shortfall*, whether in *AEMO's* reasonable opinion that *fault level shortfall* has been or will be remedied during the system strength transition period.

(c) In making its assessment under paragraph (b) for a *region*, *AEMO* must take into account:

(1) over what time period and to what extent the *three phase fault levels* at *system strength nodes* that are typically observed in the *region* are likely to be insufficient to maintain the *power system* in a *secure operating state*; and

(2) any other matters that *AEMO* reasonably considers to be relevant in making its assessment.

(d) If at any time before the expiry of the system strength transition period *AEMO* assesses that there is or is likely to be a *fault level shortfall* in a *region*, *AEMO* must publish and give to the *System Strength Service Provider* for the *region* a notice of that assessment that includes *AEMO's* specification of:

(1) the extent of the *fault level shortfall*; and

(2) the date by which the *System Strength Service Provider* must ensure the availability of *system strength services* in accordance with paragraph (e), which must not be:

(i) earlier than 12 months after the notice is published unless an earlier date is agreed with the *System Strength Service Provider*; or

(ii) after the end of the system strength transition period.

(e) If *AEMO*, before the end of the system strength transition *period*, assesses that a *fault level shortfall* in a *region* has been or will be remedied, *AEMO* must publish and give to the *System Strength Service Provider* for the *region* a notice of that assessment that includes *AEMO's* specification of the date from which the obligation of the *System Strength Service Provider* under clause 11.143.15.(b) ceases, which must not be earlier than 12 months after

the notice is published, unless an earlier date is agreed with the *System Strength Service Provider*.

(f) *AEMO* must include in its *System Strength Reports* details of *AEMO's* assessment of any *fault level shortfall* and *AEMO's* forecast of any *fault level shortfall* under this clause.

11.143.15 System strength services for new fault level shortfalls in the system strength transition period

(a) This clause (other than paragraphs (f) and (g)) applies during the system strength transition period. Paragraphs (f) and (g) continue to apply after the end of the system strength transition period.

(b) If, before the end of the system strength transition period, *AEMO* gives a notice under clause 11.143.14(d) that *AEMO* has assessed that there is or is likely to be a *fault level shortfall* at a *system strength node* in a *region*, the *System Strength Service Provider* for the *region* must make *system strength services* available in accordance with paragraph (c) that when *enabled* will address the *fault level shortfall* at the relevant *system strength node*.

(c) For the purposes of paragraph (b), a *System Strength Service Provider* for a *region* must:

(1) use reasonable endeavours to make the *system strength services* available by the date specified by *AEMO* in the notice under clause 11.143.14(d);

(2) make a range and level of *system strength services* available such that it is reasonably likely that *system strength services* that address the *fault level shortfall* when *enabled* are continuously available, taking into account planned *outages*, the risk of unplanned *outages* and the potential for the *system strength services* to impact typical patterns of *dispatched generation* in *central dispatch*; and

(3) maintain the availability of those *system strength services* until the earlier of:

(i) the date the *System Strength Service Provider's* obligation ceases, as specified by *AEMO* under clause 11.143.14(e); and

(ii) the end of the system strength transition period.

(d) A *System Strength Service Provider* required to make *system strength services* available under paragraph (b) must make available the least cost option or combination of options that will satisfy its obligation within the time referred to in subparagraph (c)(1) and for so long as the obligation to make the *system strength services* available continues.

(e) A *System Strength Service Provider* required to make *system strength services* available under paragraph (b) must comply with new clause 5.20C.3(e) and new clause 5.20C.4 in relation to those *system strength services*.

(f) A *System Strength Service Provider* must provide information in its *Transmission Annual Planning Report* about the activities undertaken to satisfy its obligation to make *system strength services* available under paragraph (b) including, in the case of proposed *network* investment:

(1) the date when the proposed relevant *network* investment became or will become operational;

(2) the purpose of the proposed relevant *network* investment;

(3) the total cost of the proposed relevant *network* investment;

(4) the indicative total costs of any *non-network options* considered.

(g) A *System Strength Service Provider* may include the cost of *system strength service payments* in the calculation of *network support payments* in accordance with new Chapter 6A.

11.143.16 Investments subject to the regulatory investment test for transmission and cost pass through

(a) The following additional exception applies under new clause 5.16.3(a) in relation to proposed expenditure during the system strength transition period:

(1) the proposed expenditure is for *network* investment undertaken by the *Transmission Network Service Provider* to satisfy its obligation as a *System Strength Service Provider* under clause 11.143.15 to make available *system strength services* in relation to a *fault level shortfall* for a *system strength node* and:

(i) immediately prior to the notice of the *fault level shortfall* being given by *AEMO* under clause 11.143.14(d), the *System Strength Service Provider* is not under an obligation to provide *system strength services* for that *system strength node* (including under rule 11.101 or clause 11.143.13); and

(ii) the time by which the *System Strength Service Provider* must make the *system strength services* available is less than 18 months after the notice is given by *AEMO* under clause 11.143.14(d).

(b) During the system strength transition period, a fault level shortfall event will be taken to be an additional *pass through event* for the purposes of new clause 6A.7.3(a1).

11.143.17 Amending Rule taken to be a pass through event

(a) The making of the Amending Rule is taken to be a *pass through event* for the *revenue determination* applicable to the current regulatory control period of a *System Strength Service Provider*.

(b) Where the *pass through event* specified in paragraph (a) is a *positive change event* in relation to a *System Strength Service Provider*, the time by which a statement must be submitted to the *AER* under clause 6A.7.3(c) in relation to the *positive change event* is (in place of 90 *business days* of the relevant *positive change event* occurring) the earlier of:

(1) the end of the *System Strength Service Provider's* current regulatory control period; and

(2) the second anniversary of the transitional rules commencement date.

11.143.18 System strength projects taken to be contingent projects

(a) A system strength project proposed to be undertaken by a *System Strength Service Provider* in its subsequent regulatory control period is taken to be:

(1) a *contingent project* in relation to the *revenue determination* of a *System Strength Service Provider* for the subsequent regulatory control period; and

(2) subject to the *trigger events* specified in paragraph (c) and where applicable, paragraph (d).

(b) For a system strength project that is a *contingent project* due to the operation of paragraph (a):

(1) the S*ystem Strength* Service *Provider* is not required to include the *proposed contingent capital expenditure* under clause 6A.8.1(a) in its *Revenue Proposal* for its subsequent regulatory control period; and

(2) the *AER* is not required to make the determination referred to in clause 6A.8.1(b).

(c) The following *trigger event* is applicable to all system strength projects that are *contingent projects* due to the operation of paragraph (a):

(1) The Board of the *System Strength Service Provider* has committed to proceed with the system strength project subject to the *AER* amending the *System Strength Service Provider's revenue determination* in accordance with clause 6A.8.2.

(d) The following *trigger event* is applicable to all system strength projects that are *contingent projects* due to the operation of paragraph (a) other than any system strength project that is not subject to the *regulatory investment test for transmission* due to the operation of new clause 5.16.3(a):

(1) The *System Strength Service Provider* has issued a *project assessment conclusions report* that meets the applicable requirements of new clause 5.16.4 and which identifies the project as the *preferred option*; and

(2) the time period in rule 5.16B(c) for giving a *dispute notice* has elapsed and no *dispute notice* been given to the *AER* under rule 5.16B(c) or, if a *dispute notice* has been given, then in accordance with rule 5.16B(d), the dispute has been rejected or the *project assessment conclusions report* has been amended and identifies the system strength project as the *preferred option*.