National Electricity Rules Version 21

Status Information

This is a draft consolidation based on the latest electronically available version of the National Electricity Rules as at 1 July 2008.

This draft consolidated version of the National Electricity Rules includes the following draft amendment.

> Draft National Electricity Amendment (Regulatory Test Thresholds and Information Disclosure on Network Replacements) Rule 2008

This version of the National Electricity Rules is provided for information purposes only. The Australian Energy Market Commission does not guarantee the accuracy, reliability or completeness of this consolidated version. The official Draft National Electricity Amendment (Regulatory Test Thresholds and Information Disclosure on Network Replacements) Rule 2008 is published separately on the website of the Australian Energy Market Commission.

This coversheet was last updated on 1 July 2008

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CHAPTER 5

5. Network Connection

5.1 Statement of Purpose

5.1.1 [Deleted]

5.1.2 Purpose

(a) This Chapter*:*

(1) provides the framework for *connection* to a *transmission network* or a *distribution network* and access to the *national grid*; and

(2) has the following aims:

(i) to detail the principles and guidelines governing *connection* and access to a *network*;

(ii) to establish the process to be followed by a *Registered Participant* or a person intending to become a *Registered Participant* for establishing or modifying a *connection* to a *network* or for altering *generating plant connected* to a *network*;

(iii) to address a *Connection Applicant's* reasonable expectations of the level and standard of *power transfer capability* that the relevant *network* should provide; and

(iv) to establish processes to ensure ongoing compliance with the technical requirements of this Chapter to facilitate management of the *national grid*.

(b) Any person who is not a *Registered Participant* may agree with a *Network Service Provider* to comply with this Chapter as part of a *connection agreement*.

(c) Nothing in the *Rules* is to be read or construed as preventing any person from constructing any *network* or *connection assets*.

5.1.3 Principles

This Chapter is based on the following principles relating to *connection* to the *national grid*:

(a) all *Registered Participants* should have the opportunity to form a *connection* to a *network* and have access to the *network services* provided by the *networks* forming part of the *national grid*;

(b) the terms and conditions on which *connection* to a *network* and provision of *network service* is to be granted are to be set out in commercial agreements on reasonable terms entered into between a *Network Service Provider* and other *Registered Participants*;

(c) the technical terms and conditions of *connection agreements* regarding standards of performance must be established at levels at or above the *minimum access standards* set out in schedules 5.1, 5.2, 5.3 and 5.3a, with the objective of ensuring that the *power system* operates securely and reliably and in accordance with the *system standards* set out in schedule 5.1a;

(d) a *Registered Participant* or person intending to become a *Registered Participant* may request *connection* of a facility, modification of a *connection*, or alteration of *connected plant* at a standard below an *automatic access standard* if the *connection*, modification to the *connection*, or alteration of *connected plant* does not adversely affect:

(1) *power system security*; and

(2) the quality of *supply* to other *Network Users*;

(e) in some jurisdictions separate agreements may be required for *connection services* and *use of system services*; and

(f) the operation of the *Rules* should result in the achievement of:

(1) long term benefits to *Registered Participants* in terms of cost and *reliability* of the *national grid*; and

(2) open communication and information flows relating to *connections* between *Registered Participants* themselves, and between *Registered Participants* and *NEMMCO*, while ensuring the security of *confidential information* belonging to competitors in the *market*.

5.2 Obligations

5.2.1 Obligations of Registered Participants

(a) All *Registered Participants* must maintain and operate (or ensure their authorised *representatives* maintain and operate) all equipment that is part of their *facilities* in accordance with:

(1) relevant laws;

(2) the requirements of the Rules; and

(3) *good electricity industry practice* and applicable *Australian Standards*.

(b) All *Registered Participants* must ensure that the *connection agreements* to which they are a party require the provision and maintenance of all required *facilities* consistent with *good electricity industry practice* and must operate their equipment in a manner:

(1) to assist in preventing or controlling instability within the *power system*;

(2) comply with the minimum standards *published* pursuant to clause 3.11.4(c);

(3) to assist in the maintenance of, or restoration to, a *satisfactory operating state* of the *power system*; and

(4) to prevent uncontrolled separation of the *power system* into isolated *regions* or partly combined *regions, intra-regional transmission* break-up, or *cascading outages*, following any *power system* incident.

5.2.2 Connection agreements

(a) If requested to do so by a *Transmission Network User*, *Distribution Network User*, *NEMMCO* or the *AER*, a *Network Service Provider* and a *Transmission Network User* or *Distribution Network User* (as the case may be) must document the terms of any *network connection* arrangements made prior to 13 December 1998 and the resulting document will then be deemed to be a *connection agreement* for the purposes of the *Rules*.

(b) The *Rules* apply to:

(1) *connection agreements* made after 13 December 1998;

(2) deemed *connection agreements* under paragraph (a); and

(3) requests to establish *connection* after 13 December 1998.

(c) This Chapter is neither intended to have, nor is it to be read or construed as having, the effect of:

(1) altering any of the terms of a *connection agreement*; or

(2) altering the contractual rights or obligations of any of the parties under the *connection agreement* as between those parties; or

(3) relieving the parties under any such *connection agreement* of their contractual obligations under such an *agreement*.

(d) Notwithstanding the provisions of clause 5.2.2(c), if any obligation imposed or right conferred on a *Registered Participant* by this Chapter is inconsistent with the terms of a *connection agreement* to which the *Rules* apply and the application of the inconsistent terms of the *connection agreement* would adversely affect the quality or security of *network service* to other *Network Users*, the parties to the *connection agreement* must observe the provisions of this Chapter as if they prevail over the *connection agreement* to the extent of the inconsistency.

5.2.3 Obligations of network service providers

(a) To be registered by *NEMMCO* as a *Network Service Provider*, a person must satisfy the relevant requirements specified in Chapter 2 and submit an application to *NEMMCO* in such form as *NEMMCO* may require.

(b) A *Network Service Provider* must comply with the *power system* performance and quality of *supply* standards:

(1) described in schedule 5.1;

(2) in accordance with any *connection agreement* with a *Registered Participant*,

and if there is an inconsistency between schedule 5.1 and such a *connection agreement*:

(3) if compliance with the relevant provision of the *connection agreement* would adversely affect the quality or security of *network service* to other *Network Users*, schedule 5.1 is to prevail;

(4) otherwise the *connection agreement* is to prevail.

(c) Where the provisions of the *connection agreement* vary the technical requirements set out in the schedules to this Chapter, the relevant *Network Service Provider* must report on such variations to *NEMMCO* on an annual basis. *NEMMCO* must allow access to such information to all other *Network Service Providers* and the *Network Service Providers* must keep such information confidential.

(d) A *Network Service Provider* must:

(1) review and process *applications to connect* or modify a *connection* which are submitted to it and must enter into a *connection agreement* with each *Registered Participant* and any other person to which it has provided a *connection* in accordance with rule 5.3 to the extent that the *connection point* relates to its part of the *national grid*;

(1A) co-operate with any other *Network Service Provider* who is processing a *connection* enquiry or *application to connect* to allow that *connection* enquiry or *application to connect* to be processed expeditiously and in accordance with rule 5.3;

(2) ensure that, to the extent that a *connection point* relates to its part of the *national grid*, every arrangement for *connection* with a *Registered Participant* or any other arrangement involving a *connection agreement* with that *Network Service Provider* complies with all relevant provisions of the *Rules*;

(3) co-ordinate the design aspects of equipment proposed to be *connected* to its *networks* with those of other *Network Service Providers* in accordance with rule 5.4 in order to seek to achieve *power system* performance requirements in accordance with schedule 5.1;

(4) together with other *Network Service Providers*, arrange for and participate in planning and development of their *networks* and *connection points* on or with those *networks* in accordance with rule 5.6;

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

(6) permit and participate in commissioning of *facilities* and equipment which are to be *connected* to its *network* in accordance with rule 5.8;

(7) advise a *Registered Participant* or other person with whom there is a *connection agreement* upon request of any expected interruption characteristics at a *connection point* on or with its *network* so that the *Registered Participant* or other person may make alternative arrangements for *supply* during such interruptions, including negotiating for an alternative or backup *connection*;

(8) use its reasonable endeavours to ensure that modelling data used for planning, design and operational purposes is complete and accurate and order tests in accordance with rule 5.7 where there are reasonable grounds to question the validity of data;

(9) provide to *NEMMCO* and other *Network Service Providers* all data available to it and reasonably required for modelling the static and *dynamic performance* of the *power system*;

(10) forward to *NEMMCO* and other *Network Service Providers* subsequent updates of the data referred to in clause 5.2.3(d)(9) and, to the best of its ability and knowledge, ensure that all data used for the purposes referred to in rule 5.3 is consistent with data used for such purposes by other *Network Service Providers*;

(11) provide to *NEMMCO* the information required from *Generators* under schedule 5.2 and from *Customers* under schedule 5.3 and from *Market Network Service Providers* under schedule 5.3a in relation to a *connection agreement* and details of any *connection points* with other *Network Service Providers*; and

(12) where *network augmentations*, setting changes or other technical issues arise which could impact across *regional* boundaries, provide *NEMMCO* with a written report on the impact and its effects.

(e) A *Network Service Provider* must arrange for operation of that part of the *national grid* over which it has control in accordance with instructions given by *NEMMCO*.

(e1) A *Network Service Provider* must, except in so far as its *market network services* and parts of its *network* which are used solely for the provision of *market network services* are concerned, arrange for:

(1) management, maintenance and operation of its part of the *national grid* such that, in the *satisfactory operating state*, electricity may be transferred continuously at a *connection point* on or with its *network* up to the *agreed capability*;

(2) operation of its *network* such that the fault level at any *connection point* on or with that *network* does not exceed the limits that have been specified in a *connection agreement*;

(3) management, maintenance and operation of its *network* to minimise the number of interruptions to *agreed capability* at a *connection point* on or with that *network* by using *good electricity industry practice*; and

(4) restoration of the *agreed capability* at a *connection point* on or with that *network* as soon as reasonably practicable following any interruption at that *connection point*.

(f) A *Network Service Provider* must comply with *applicable regulatory instruments*.

(g) Each *Network Service Provider* must in respect of new or altered equipment owned, operated or controlled by it for the purpose of providing a *market network service*:

(1) submit an *application to connect* 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 *NEMMCO* and 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 5.4 and schedule 5.3a;

(3) provide forecast information to the relevant *Network Service Provider* in accordance with rule 5.6;

(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 intended voluntary permanent *disconnection* in accordance with rule 5.9.

(h) **[Deleted]**

(h1) On receipt of a written request from Basslink Pty Ltd or another party nominated in writing to *NEMMCO* by the Basslink Development Board (collectively 'Basslink') together with a copy of the *application to connect* lodged by Basslink with the relevant *Transmission Network Service Provider*, including all necessary supporting information and data required under clause 5.3.3(c), the *Inter-regional Planning Committee* must in accordance with clause 5.6.3 advise *NEMMCO* of the requirements that should be imposed on Basslink as the intending *Market Network Service Provider* for the purposes of clause 5.2.3(g)(2).

(h2) The *Inter-regional Planning Committee* must, in preparing its advice to *NEMMCO* under 5.2.3(h1), conduct a review of the technical impacts of the proposed interconnector to be constructed by Basslink covering those matters in clause 5.6.6(c)(1), (2) and (4) and *publish* a report of its review.

(h3) *NEMMCO* must, following receipt of advice from the *Inter-regional Planning Committee* in accordance with clause 5.2.3(h1), advise the relevant *Transmission Network Service Provider* and Basslink of its reasonable design requirements in respect of the equipment proposed to be *connected* to the *network* as set out in rule 5.4 and schedule 5.3a, in addition to those reasonable design requirements of the relevant *Transmission Network Service Provider*, for the purposes of clause 5.2.3(g)(2).

(i) This Chapter is neither intended to require, nor is it to be read or construed as having the effect of requiring, a *Network Service Provider* to permit

connection to or to *augment* any part of its *network* which is solely used for the provision of *market network services.*

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.*

(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 5.4 and schedule 5.3;

(3) provide *load* forecast information to the relevant *Network Service Provider* in accordance with rule 5.6;

(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.

5.2.5 Obligations of Generators

(a) A *Generator* must plan and design its *facilities* and ensure that they are operated to comply with:

(1) the *performance standards* applicable to those *facilities*;

(2) subject to subparagraph (1), its *connection agreement* applicable to those *facilities*; and

(3) subject to subparagraph (2), the *system standards*.

(b) A *Generator* must:

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

(2) comply with the reasonable requirements of the relevant *Network Service Provider* in respect of design requirements of *generating plant* proposed to be *connected* to the *network* of that provider in accordance with rule 5.4 and schedule 5.2;

(3) provide *generation* forecast information to the relevant *Network Service Provider* in accordance with rule 5.6;

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

5.3 Establishing or Modifying Connection

5.3.1 Process and procedures

(a) For the purposes of this rule 5.3:

establish a connection includes modify an existing *connection* or alter *plant* but does not include alterations to *generating plant* in the circumstances set out in clause 5.3.9.

(b) 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.

(c) Any person wishing to establish a *connection* to a *network* may elect to follow the procedures in this rule 5.3.

(d) A *Generator* wishing to alter *connected generating plant* must comply with clause 5.3.9.

5.3.2 Connection enquiry

(a) A person referred to in clause 5.3.1(b) or (c) who wishes to make an *application to connect* must first make a *connection* enquiry by advising the *Local Network Service Provider* of the type, magnitude and timing of the proposed *connection* to that provider's *network.*

(b) If the information submitted with a *connection* enquiry is inadequate to enable the *Local Network Service Provider* to process the enquiry the provider must within 5 *business days*, advise the *Connection Applicant* what other relevant preliminary information of the kind listed in schedule 5.4 is required before the *connection* enquiry can be further processed.

(c) The *Local Network Service Provider* must advise the *Connection Applicant* within 10 *business days* of receipt of the *connection* enquiry and the further information required in accordance with paragraph (b) if the enquiry would be more appropriately directed to another *Network Service Provider*.

(d) The *Connection Applicant*, notwithstanding the advice received under paragraph (c), may if it is reasonable in all the circumstances, request the *Local Network Service Provider* to process the *connection* enquiry and the provider must meet this request.

(e) Where the *Local Network Service Provider* considers that the *connection* enquiry should be jointly examined by more than one *Network Service Provider*, with the agreement of the *Connection Applicant*, one of those *Network Service Providers* may be allocated the task of liaising with the *Connection Applicant* and the other *Network Service Providers* to process and respond to the enquiry.

(f) A *Network Service Provider* must to the extent that it holds technical information necessary to facilitate the processing of a *connection* enquiry made in accordance with paragraph (a) or an *application to connect* in accordance with clause 5.3.4(a), provide that information to the *Connection Applicant* in accordance with the relevant requirements of schedule 5.1, 5.2, 5.3 or 5.3a.

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 10 *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 10 *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* or must be involved under clause 5.3.5(e); 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) whether any service the *Network Service Provider* proposes to provide is *contestable* in the relevant *participating jurisdiction*; and

(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.

(b1) The *Network Service Provider* must:

(1) within 20 *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 20 *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 *NEMMCO'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.

(b2) A *Registered Participant*, *NEMMCO* 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 *NEMMCO* using the *Rules consultation procedures*.

(c) Within 20 *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 6.6 and 6.7;

(5) the amount of the application fee which is payable on lodgement of an *application to connect*, such amount not being more than necessary to:

(i) cover the reasonable costs of all work anticipated to arise from investigating the *application to connect* and preparing the associated offer to *connect*; and

(ii) meet the reasonable costs anticipated to be incurred by *NEMMCO* and other *Network Service Providers* whose participation in the assessment of the *application to connect* will be required; and

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

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 and clause 5.3.4A.

(b) To be eligible for *connection*, the *Connection Applicant* must submit an *application to connect* containing the information specified in clause 5.3.3(c) and the relevant application fee to the relevant *Network Service Provider*.

(c) 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 *NEMMCO* 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 *NEMMCO*, 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; or

(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*.

5.3.4A Negotiated access standards

(a) For the purposes of this clause 5.3.4A:

NEMMCO advisory matter means a matter that relates to *NEMMCO's* functions under the *National Electricity Law* and a matter in which *NEMMCO* has a role in schedules 5.1a, 5.1, 5.2, 5.3 and 5.3a.

(b) A *negotiated access standard* must:

(1) be no less onerous than the corresponding *minimum access standard* provided by the *Network Service Provider* under clause 5.3.3(b1)(4);

(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 clauses S5.2.5, S5.2.6, S5.2.7 and S5.2.8.

(c) A *Network Service Provider* must following the receipt of a proposed *negotiated access standard* under clause 5.3.4(e) or paragraph (h), consult

with *NEMMCO* as soon as practicable in relation to *NEMMCO* advisory matters for that proposed standard.

(d) *NEMMCO* must within 20 *business day*s following the submission of a proposed *negotiated access standard* under clause 5.3.4(e) or paragraph (h)(3), respond to the *Network Service Provider* in writing in respect of any *NEMMCO* advisory matters.

(e) A *Network Service Provider* must within 30 *business days* following the receipt of a proposed *negotiated access standard* in accordance with clause 5.3.4(e) or paragraph (h)(3), accept or reject a proposed *negotiated access standard*.

(f) The *Network Service Provider* must reject the proposed *negotiated access standard* if that *connection*, or alteration of the *generating plant* (as the case may be), at the *negotiated access standard* proposed by the *Connection Applicant* would:

(1) on *NEMMCO's* reasonable advice, adversely affect *power system security*;

(2) in the *Network Service Provider's* reasonable opinion, adversely affect quality of *supply* for other *Network Users*;

(3) in the reasonable opinion of *NEMMCO* or the *Network Service Provider*, in respect of a *NEMMCO* advisory matter or a matter allocated to the *Network Service Provider*, respectively, be lower than the corresponding *minimum access standard*; or

(4) in respect of *generating plant*, in *NEMMCO's* reasonable opinion, not satisfy paragraph (b)(4).

(g) If a *Network Service Provider* rejects a proposed *negotiated access standard*, the *Network Service Provider* must when rejecting the proposed *negotiated access standard*, advise the *Connection Applicant* of a *negotiated access standard* that the *Network Service Provider* will accept.

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

(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.

5.3.5 Preparation of offer to connect

(a) The *Network Service Provider* to whom the *application to connect* is submitted:

(1) at the *automatic access standard* under clause 5.3.4; or

(2) at a *negotiated access standard* that the provider has accepted under clause 5.3.4A(e),

must proceed to prepare an offer to *connect* in response.

(b) The *Network Service Provider* must use its reasonable endeavours to advise the *Connection Applicant* of all risks and obligations in respect of the proposed *connection* associated with planning and environmental laws not contained in the *Rules.*

(c) The *Connection Applicant* must provide such other additional information in relation to the *application to connect* as the *Network Service Provider* reasonably requires to assess the technical performance and costs of the required *connection* and to enable the *Network Service Provider* to prepare an offer to *connect*.

(d) So as to maintain levels of service and quality of *supply* to existing *Registered Participants* in accordance with the *Rules*, the *Network Service Provider* in preparing the offer to *connect* must consult with *NEMMCO* and other *Registered Participants* 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, in order to assess the *application to connect* and determine:

(1) the technical requirements for the equipment to be *connected*;

(2) the extent and cost of *augmentations* and changes to all affected *networks*;

(3) any consequent change in *network service* charges; and

(4) any possible material effect of this new *connection* on the *network power transfer capability* including that of other *networks*.

(e) If the *application to connect* involves the *connection* of *generating units* having a *nameplate rating* of 10 MW or greater to a *distribution network*, the *Distribution Network Service Provider* must consult the relevant *Transmission Network Service Provider* regarding the impact of the *connection* contemplated by the *application to connect* on fault levels, line reclosure protocols, and stability aspects.

(f) The *Transmission Network Service Provider* consulted under paragraph (e) must determine the reasonable costs of addressing those matters for inclusion in the offer to *connect* and the *Distribution Network Service Provider* must make it a condition of the offer to *connect* that the *Connection Applicant* pay these costs.

(g) The *Network Service Provider* preparing the offer to *connect* must include provision for payment of the reasonable costs associated with *remote control equipment* and *remote monitoring equipment* as required by *NEMMCO* and it may be a condition of the offer to *connect* that the *Connection Applicant* pay such costs.

5.3.6 Offer to connect

(a) Subject to clause 5.3.3(b)(6), the *Network Service Provider* processing the *application to connect* must make an offer to *connect* the *Connection Applicant's facilities* to the *network* within the time period specified in the *preliminary program*.

(a1) The *Network Service Provider* may amend the time period referred to in clause 5.3.6(a) to allow for any additional time taken in excess of the period allowed in the *preliminary program* for the negotiation of *negotiated access standards* in accordance with clause 5.3.4A.

(b) The offer to *connect* must contain the proposed terms and conditions for *connection* to the *network* including:

(1) for each technical requirement identified by the *Network Service Provider* under clause 5.3.3(b1), the *automatic access standard* or the *negotiated access standard* as determined in accordance with clauses 5.3.4 and 5.3.4A; and

(2) the terms and conditions of the kind set out in schedule 5.6,

and must be capable of acceptance by the *Connection Applicant* so as to constitute a *connection agreement.*

(b1) The proposed terms and conditions detailed in the offer to *connect* must be no lower than the applicable *minimum access standards*.

(c) The offer to *connect* must be fair and reasonable and must be consistent with the safe and *reliable* operation of the *power system* in accordance with the *Rules*. Without limitation, unless the parties otherwise agree, to be fair and reasonable an offer to *connect* must offer *connection* and *network services* consistent with schedule 5.1 and (as applicable) schedules 5.2, 5.3 and 5.3a and must not impose conditions on the *Connection Applicant* which are more onerous than those contemplated in schedules 5.1, 5.2, 5.3 or 5.3a.

(c1) An offer to *connect* and the resulting *connection agreement* must be consistent with any minimum standards set by *NEMMCO* under clause 3.11.4(b)(1).

(d) The *Network Service Provider* must use its reasonable endeavours to provide the *Connection Applicant* with an offer to *connect* in accordance with the reasonable requirements of the *Connection Applicant*, including without limitation, the location of the proposed *connection point* and the level and standard of *power transfer capability* that the *network* will provide.

(e) An offer to *connect* may contain options for *connection* to a *network* at more than one point in a *network* and/or at different levels of service and with different terms and conditions applicable to each *connection point* according to the different characteristics of *supply* at each *connection point*.

(f) Both the *Network Service Provider* and the *Connection Applicant* are entitled to negotiate with each other in respect of the provision of *connection* and any other matters relevant to the provision of *connection* and, if negotiations occur, the *Network Service Provider* and the *Connection Applicant* must conduct such negotiations in good faith.

(g) An offer to *connect* must define the basis for determining *transmission service* charges in accordance with Chapter 6A, including the prudential requirements set out in that Chapter.

(h) An offer to *connect* must define the basis for determining *distribution service* charges in accordance with Chapter 6, including the prudential requirements set out in Part K of Chapter 6.

(i) An offer to *connect* in respect of a *transmission network* must conform with the access arrangements set out in rule 5.4A.

(j) An offer to *connect* in respect of a *distribution network* made to an *Embedded Generator* or a *Market Network Service Provider*, must conform with the relevant access arrangements set out in rule 5.5.

(k) Nothing in the *Rules* is to be read or construed as imposing an obligation on a *Network Service Provider* to effect an extension of a *network* unless that

extension is required to effect or facilitate the *connection* of a *Connection Applicant* and the *connection* is the subject of a *connection agreement.*

5.3.7 Finalisation of connection agreements

(a) If a *Connection Applicant* wishes to accept an offer to *connect*, the *Connection Applicant* must negotiate and enter into a *connection agreement* with each relevant *Network Service Provider* identified in accordance with clauses 5.3.3(b)(3) and (4) and in doing so must use its reasonable endeavours to negotiate in good faith with all parties with which the *Connection Applicant* must negotiate such a *connection agreement*.

(b) The *connection agreement* must include proposed *performance standards* with respect to each of the technical requirements identified in schedules 5.2, 5.3 and 5.3a and each proposed *performance standard* must have been established in accordance with the relevant technical requirement.

(c) The proposed *performance standards* must be based on the *automatic access standard* or, if the procedures in clause 5.3.4A have been followed, the *negotiated access standard*.

(d) The provision of *connection* by any *Network Service Provider* may be made subject to gaining environmental and planning approvals for any necessary *augmentation* or *extension* works to a *network*.

(e) Where permitted by the applicable law in the relevant *participating jurisdiction*, the *connection agreement* may assign responsibility to the *Connection Applicant* for obtaining the approvals referred to in paragraph (d) as part of the project proposal and the *Network Service Provider* must provide all reasonable information and may provide reasonable assistance for a reasonable fee to enable preparation of applications for such approvals.

(f) Subject to paragraph (e), each *connection agreement* must be based on the offer to *connect* as varied by agreement between the parties.

(g) The *Network Service Provider* responsible for the *connection point* and the *Registered Participant* must jointly notify *NEMMCO* that a *connection agreement* has been entered into between them and forward to *NEMMCO* relevant technical details of the proposed *plant* and *connection*, including as applicable:

(1) details of all *performance standards* that form part of the terms and conditions of the *connection agreement*;

(2) if a *Generator*, the arrangements for updating the information required under clause S5.2.4(b);

(3) the proposed *metering installation*;

(4) arrangements for the *Metering Provider* to obtain physical access to the *metering installation*; and

(5) the terms upon which a *Registered Participant* is to supply any *ancillary services* under the *connection agreement*.

(h) *NEMMCO* must, within 20 *business days* of receipt of the notice under paragraph (g), advise the relevant *Network Service Provider* and the *Registered Participant* of whether the proposed *metering installation* is acceptable for those *metering installations* associated with those *connection points* which are classified as *metering installation* types 1, 2, 3 and 4 as specified in schedule 7.2.

5.3.8 Provision and use of information

(a) The data and information provided under this rule 5.3 is *confidential information* and must:

(1) be prepared, given and used in good faith; and

(2) not be disclosed or made available by the recipient to a third party except in the circumstances set out in this clause 5.3.8.

(b) The data and information to be provided under this rule 5.3 may be shared between a *Network Service Provider* and *NEMMCO* for the purpose of enabling:

(1) the *Network Service Provider* to advise *NEMMCO* of *ancillary services* or similar services described in clause 3.11.3(j); and

(2) either party to:

(i) assess the effect of a proposed *facility* or proposed alteration to *generating plant* (as the case may be) on:

(A) the performance of the *power system*; or

(B) another proposed *facility* or another proposed alteration;

(ii) assess proposed *negotiated access standards*; or

(iii) determine the extent of any required *augmentation* or *extension*.

(c) A *Network Service Provider* may disclose the data and information to be provided under this rule 5.3 to another *Network Service Provider* if the *Network Service Provider* considers the information or data is materially relevant to that provider for *connection*.

(d) A person intending to disclose information under paragraphs (b) and (c) must first advise the relevant *Connection Applicant* of the extent of the disclosure.

(e) If a *Connection Applicant* or *Network Service Provider* becomes aware of any material change to any information contained in or relevant to an *application to connect*, it must promptly notify the other party in writing of that change.

(f) A *Registered Participant* must, within 5 *business days* of becoming aware that any information provided to *NEMMCO* in relation to a *performance standard* or other information of a kind required to be provided to *NEMMCO* under clause 5.3.7 is incorrect, advise *NEMMCO* of the correct information.

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

(a) This clause 5.3.9 applies where a *Generator* proposes to alter:

(1) a *connected generating system*; or

(2) a *generating system* for which *performance standards* have been previously accepted by *NEMMCO*,

in a manner that 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.

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

(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 *Generating System Model Guidelines, Generating System Design Data Sheet*, or *Generating System Setting Data Sheet*; and

(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:

(i) the applicable *automatic access standard*; or

(ii) a proposed *negotiated access standard*.

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

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

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
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, S5.2.5.12, 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
auxiliary supplies	S5.2.5.1, S5.2.5.2, S5.2.8
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 provider, other *Network Service Providers* and *NEMMCO*, in the assessment of the submission.

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

(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 *NEMMCO*, 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 *NEMMCO*.

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 *NEMMCO* are satisfied in accordance with paragraph (b).

(b) In relation to altered *generating plant*, the *Network Service Provider* and *NEMMCO*, to the extent of *NEMMCO's* advisory role under clause 5.3.4A, 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).

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

5.4 Design of Connected Equipment

5.4.1 Application

This rule 5.4 applies to new installations and modifications to existing installations that include alterations to existing *generating plant*, after:

(a) 13 December 1998, in the case of installations located in *participating jurisdictions* other than Tasmania; and

(b) 29 May 2005, in the case of installations located in Tasmania.

5.4.2 Advice of inconsistencies

(a) At any stage prior to commissioning the *facility* in respect of a *connection* if there is an inconsistency between the proposed equipment and the *connection agreement* including the *performance standards*, the *Registered Participant* or the person intending to be registered as a *Generator* must:

(1) advise the relevant *Network Service Provider* and, if the inconsistency relates to *performance standards*, *NEMMCO*, in writing of the inconsistency; and

(2) if necessary, negotiate in good faith with the *Network Service Provider* any necessary changes to the *connection agreement*.

(b) If an inconsistency in a *connection agreement* including a *performance standard* is identified under paragraph (a), the *Registered Participant* or the person intending to be registered as a *Generator* and the *Network Service Provider* must not commission the *facility* in respect of a *connection* unless the *facility* or the *connection agreement* or *performance standard* has been varied to remove the inconsistency.

(c) Nothing in this clause 5.4.2 affects the operation of clause 5.3.6(c1).

5.4.3 Additional information

A *Registered Participant* must provide any additional information in relation to its *plant* or associated equipment as the relevant *Network Service Provider* reasonably requests.

5.4.4 Advice on possible non-compliance

(a) If the relevant *Network Service Provider* reasonably believes that the design of a proposed *facility* has potential to adversely and materially affect the performance of the *power system*, the *Network Service Provider* may require the *Registered Participant* to submit to it specified design information and drawings to enable the *Network Service Provider* to assess the performance of the *facility* in respect of its interaction with the *power system*:

(1) after the *Registered Participant* has entered into an agreement for the supply of *plant* or associated equipment to be connected; and

(2) when the relevant contractor's designs have progressed to a point where preliminary designs are available but prior to manufacture of equipment.

(b) The *Network Service Provider* must, within 40 *business days* of receipt of such information, use its reasonable endeavours to advise the *Registered Participant* in writing of any design deficiencies which the *Network Service Provider* believes would cause the design to be inconsistent with the *connection agreement* or the *Rules*.

(c) Notwithstanding clause 5.4.4(b), it is the *Registered Participant's* sole responsibility to ensure that all *plant* and equipment associated with the *connection* complies with the *connection agreement* and the *Rules*.

5.4A Access arrangements relating to Transmission Networks

(a) The *Transmission Network Service Provider* referred to in this rule 5.4A is the *Transmission Network Service Provider* required under clause 5.3.3 to process and respond to a *connection* enquiry or required under clause 5.3.5 to prepare an offer to *connect* for the establishment or modification of a *connection* to the *transmission network* owned, controlled or operated by that *Transmission Network Service Provider* or for the provision of *network service*.

(b) If requested by a *Connection Applicant*, whether as part of a *connection* enquiry, application to *connect* or the subsequent negotiation of a *connection* agreement, the *Transmission Network Service Provider* must negotiate in good faith with the *Connection Applicant* to reach agreement in respect of the *transmission network user access* arrangements sought by the *Connection Applicant*.

(c) As a basis for negotiations under paragraph (b):

(1) the *Connection Applicant* must provide to the *Transmission Network Service Provider* such information as is reasonably requested relating to the expected operation of:

(i) its *generating units* (in the case of a *Generator*);

(ii) its *network elements* used in the provision of *network service* (in the case of a *Network Service Provider*); or

(iii) its *plant* (in the case of any other kind of *Connection Applicant*); and

(2) the *Transmission Network Service Provider* must provide to the *Connection Applicant* such information as is reasonably requested to allow the *Connection Applicant* to fully assess the commercial significance of the *transmission network user access* arrangements sought by the *Connection Applicant* and offered by the *Transmission Network Service Provider*.

(d) A *Connection Applicant* may seek *transmission network user access* arrangements at any level of *power transfer capability* between zero and:

(1) in the case of a *Generator*, the *maximum power input* of the relevant *generating units* or group of *generating units*;

(2) in the case of a *Network Service Provider*, the *power transfer capability* of the relevant *network elements*; and

(3) in the case of any other kind of *Connection Applicant*, the *maximum demand* at the *connection point* for the relevant *plant*.

(e) The *Transmission Network Service Provider* must use reasonable endeavours to provide the *transmission network user access* arrangements being sought by the *Connection Applicant* subject to those arrangements being consistent with *good electricity industry practice* considering:

(1) the *connection assets* to be provided by the *Transmission Network Service Provider* or otherwise at the *connection point*; and

(2) the potential *augmentations* or *extensions* required to be undertaken on all affected *transmission networks* or *distribution networks* to provide that level of *power transfer capability* over the period of the *connection agreement* taking into account the amount of *power transfer capability* provided to other *Registered Participants* under *transmission network user access* or *distribution network user access* arrangements in respect of all affected *transmission networks* and *distribution networks*.

(f) The *Transmission Network Service Provider* and the *Connection Applicant* must negotiate in good faith to reach agreement as appropriate on:

(1) the *connection service* charge to be paid by the *Connection Applicant* in relation to *connection assets* to be provided by the *Transmission Network Service Provider*;

(2) in the case of a *Market Network Service Provider*, the service level standards to which the *Market Network Service Provider* requires the *Transmission Network Service Provider* to adhere in providing it services;

(3) the *use of system services* charge to be paid:

(i) by the *Connection Applicant* in relation to any augmentations or extensions required to be undertaken on all affected transmission networks and distribution networks; and

(ii) where the *Connection Applicant* is a *Market Network Service Provider*, to the *Market Network Service Provider* in respect of any reduction in the long run marginal cost of *augmenting* the *transmission network* as a result of it being *connected* to the *transmission network*;

(‘*negotiated use of system charges*’); and

(4) the amounts (‘*access charges*’) referred to in paragraphs (g)-(j).

(g) The amount to be paid by the *Connection Applicant* to the *Transmission Network Service Provider* in relation to the costs reasonably incurred by the provider in providing *transmission network user access*.

(h) Where the *Connection Applicant* is a *Generator*:

(1) the compensation to be provided by the *Transmission Network Service Provider* to the *Generator* in the event that the *generating units* or group of *generating units* of the *Generator* are *constrained off* or *constrained on* during a *trading interval*; and

(2) the compensation to be provided by the *Generator* to the *Transmission Network Service Provider* in the event that *dispatch* of the *Generator's generating units* or group of *generating units* causes another *Generator's generating units* or group of *generating units* to be *constrained off* or *constrained on* during a *trading interval*.

(i) Where the *Connection Applicant* is a *Market Network Service Provider:*

(1) the compensation to be provided by the *Transmission Network Service Provider* to the *Market Network Service Provider* in the event that the *transmission network user access* is not provided; and

(2) the compensation to be provided by the *Market Network Service Provider* to the *Transmission Network Service Provider* in the event that *dispatch* of the relevant *market network service* causes a *Generator's generating units* or group of *generating units* to be *constrained off* or *constrained on* during a *trading interval* or causes the *dispatch* of another *market network service* to be *constrained*.

(j) In the case of any other kind of *Connection Applicant*, the compensation to be provided by the *Transmission Network Service Provider* to the *Connection Applicant* in the event that the *transmission network user access* is not provided.

(k) The maximum charge that can be applied by the *Transmission Network Service Provider* in respect of *negotiated use of system charges* for the *transmission network* is a charge that is determined in accordance with Part J of Chapter 6A.

5.5 Access arrangements relating to Distribution Networks

(a) In this rule 5.5:

(1) the *Distribution Network Service Provider* is the *Distribution Network Service Provider* required under clause 5.3.3 to process and respond to a *connection* enquiry or required under clause 5.3.5 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 *network service*; and

(2) the references to a *Connection Applicant* are to an *Embedded Generator* or *Market Network Service Provider* who makes a *connection* enquiry under clause 5.3.2 or an application to *connect* under clause 5.3.4 in relation to any *generating units* or group of *generating units*, or any *network elements* used in the provision of *network service*, as the case may be.

(b) If requested by a *Connection Applicant*, whether as part of a *connection* enquiry, application to *connect* or the subsequent negotiation of a *connection agreement*, the *Distribution Network Service Provider* must negotiate in good faith with the *Connection Applicant* to reach agreement in respect of the *distribution network user access* arrangements sought by the *Connection Applicant*.

(c) As a basis for negotiations under paragraph (b):

(1) the *Connection Applicant* must provide to the *Distribution Network Service Provider* such information as is reasonably requested relating to the expected operation of:

(i) its *generating units* (in the case of an *Embedded Generator*); or

(ii) its *network elements* used in the provision of *network service* (in the case of a *Market Network Service Provider*); and

(2) the *Distribution Network Service Provider* must provide to the *Connection Applicant* such information as is reasonably requested to allow the *Connection Applicant* to fully assess the commercial significance of the *distribution network user access* arrangements sought by the *Connection Applicant* and offered by the *Distribution Network Service Provider*.

(d) A *Connection Applicant* may seek *distribution network user access* arrangements at any level of *power transfer capability* between zero and:

(1) in the case of an *Embedded Generator*, the *maximum power input* of the relevant *generating units* or group of *generating units*; and

(2) in the case of a *Market Network Service Provider*, the *power transfer capability* of the relevant *network elements*.

(e) The *Distribution Network Service Provider* must use reasonable endeavours to provide the *distribution network user access* arrangements being sought by the *Connection Applicant* subject to those arrangements being consistent with *good electricity industry practice* considering:

(1) the *connection assets* to be provided by the *Distribution Network Service Provider* or otherwise at the *connection point*; and

(2) the potential *augmentations* or *extensions* required to be undertaken on all affected *transmission networks* or *distribution networks* to provide that level of *power transfer capability* over the period of the *connection agreement* taking into account the amount of *power transfer capability* provided to other *Registered Participants* under *transmission network* user access or *distribution network user access* arrangements in respect of all affected *transmission networks* and *distribution networks*.

(f) The *Distribution Network Service Provider* and the *Connection Applicant* must negotiate in good faith to reach agreement as appropriate on:

(1) the *connection service charge* to be paid by the *Connection Applicant* in relation to *connection assets* to be provided by the *Distribution Network Service Provider*;

(2) in the case of a *Market Network Service Provider*, the service level standards to which the *Market Network Service Provider* requires the *Distribution Network Service Provider* to adhere in providing it services;

(3) the *use of system services* charge to be paid:

(i) by the *Connection Applicant* in relation to any *augmentations* or *extensions* required to be undertaken on all affected *transmission networks* and *distribution networks*; and

(ii) where the *Connection Applicant* is a *Market Network Service Provider*, to the *Market Network Service Provider* in respect of any reduction in the long run marginal cost of *augmenting* the *distribution network* as a result of it being *connected* to the *distribution network*,

(‘*negotiated use of system charges’*); and

(4) the following amounts:

(i) the amount to be paid by the *Connection Applicant* to the *Distribution Network Service Provider* in relation to the costs reasonably incurred by the *Distribution Network Service Provider* in providing *distribution network user access*;

(ii) where the *Connection Applicant* is an *Embedded Generator*:

(A) the compensation to be provided by the *Distribution Network Service Provider* to the *Embedded Generator* in the event that the *generating units* or group of *generating units* of the *Embedded Generator* are *constrained off* or *constrained on* during a *trading interval*; and

(B) the compensation to be provided by the *Embedded Generator* to the *Distribution Network Service Provider* in the event that dispatch of the *Embedded Generator's generating units* or group of *generating units* causes another *Generator's generating units* or group of *generating units* to be *constrained off* or *constrained on* during a *trading interval*; and

(iii) where the *Connection Applicant* is a *Market Network Service Provider*:

(A) the compensation to be provided by the *Distribution Network Service Provider* to the *Market Network Service Provider* in the event that the *distribution network user access* is not provided; and

(B) the compensation to be provided by the *Market Network Service Provider* to the *Distribution Network Service Provider* in the event that *dispatch* of the relevant *market network service* causes a *Generator's generating units* or group of *generating units* to be *constrained off* or *constrained on* during a *trading interval* or causes the *dispatch* of another *market network service* to be *constrained*.

(g) The maximum negotiated *use of system* charges applied by a *Distribution Network Service Provider* must be in accordance with the applicable requirements of Chapter 6 and the *Negotiated Distribution Service Criteria* applicable to the *Distribution Network Service Provider*.

(h) A *Distribution Network Service Provider* must pass through to a *Connection Applicant* the amount calculated in accordance with paragraph (i) for the locational component of *prescribed TUOS services* that would have been payable by the *Distribution Network Service Provider* to a *Transmission Network Service Provider* had the *Connection Applicant* not been *connected* to its *distribution network (*'avoided charges for the locational component of *prescribed TUOS services*').

(i) To calculate the amount to be passed through to a *Connection Applicant* in accordance with paragraph (h), a *Distribution Network Service Provider* must, if prices for the locational component of *prescribed TUOS services* were in force at the relevant *transmission network connection point* throughout the relevant *financial year*:

(1) determine the charges for the locational component of *prescribed TUOS services* that would have been payable by the *Distribution Network Service Provider* for the relevant *financial year*:

(i) where the *Connection Applicant* is an *Embedded Generator*, if that *Embedded Generator* had not injected any *energy* at its *connection point* during that *financial year*;

(ii) where the *Connection Applicant* is a *Market Network Service Provider*, if the *Market Network Service Provider* had not been *connected* to the *Distribution Network Service Provider's distribution network* during that *financial year*; and

(2) determine the amount by which the charges calculated in subparagraph (1) exceed the amount for the locational component of *prescribed TUOS services* actually payable by the *Distribution Network Service Provider*, which amount will be the relevant amount for the purposes of paragraph (h).

(j) Where prices for the locational component of *prescribed TUOS services* were not in force at the relevant *distribution network connection point* throughout the relevant *financial year*, as referred to in paragraph (i), the *Distribution Network Service Provider* must apply an equivalent procedure to that referred to in paragraph (i) in relation to that component of its *transmission use of system service* charges which is deemed by the relevant *Transmission Network Service Provider* to represent the marginal cost of *transmission*, less an allowance for locational signals present in the *spot market*, to determine the relevant amount for the purposes of paragraph (h).

5.6 Planning and Development of Network

5.6.1 Forecasts for connection points to transmission network

(a) The relevant *Network Service Provider* must give at least 40 *business days* written notice to each relevant *Registered Participant* of the annual date by which the *Registered Participant* must provide the relevant *Network Service Provider* with the short and long term electricity *generation, market network service* and *load* forecast information listed in schedule 5.7 in relation to each *connection point* which *connects* the *Registered Participant* to a *transmission network* of that *Network Service Provider* and any other relevant information as reasonably required by the *Network Service Provider*.

(b) Details of planned future *generating units, market network services* and *loads*, being details regarding the proposed commencing date, *active power capability* and *reactive power capability, power transfer capability,* operating times/seasons and special operating requirements, must be given by each relevant *Registered Participant* to the relevant *Network Service Provider* on reasonable request.

(c) Each relevant *Registered Participant* must use reasonable endeavours to provide accurate information under clause 5.6.1(a) which must include

details of any factors which may impact on *load* forecasts or proposed *facilities* for *generation* or *market network services*.

(d) If the *Network Service Provider* reasonably believes any forecast information to be inaccurate, the *Network Service Provider* may modify that forecast information and must advise the relevant *Registered Participant* and *NEMMCO* in writing of this action and the reason for the modification. The *Network Service Provider* is not responsible for any adverse consequences of this action or for failing to modify forecast information under this clause 5.6.1(d).

5.6.2 Network Development

(a1) The terms *Network Service Provider, Transmission Network Service Provider* and *Distribution Network Service Provider* when used in this clause 5.6.2 are not intended to refer to, and are not to be read or construed as referring to, any *Network Service Provider* in its capacity as a *Market Network Service Provider*.

(a) Each *Transmission Network Service Provider* and *Distribution Network Service Provider* must analyse the expected future operation of its *transmission networks* or *distribution networks* over an appropriate planning period, taking into account the relevant forecast *loads*, any future *generation*, *market network service*, demand side and *transmission* developments and any other relevant data.

(b) Each *Transmission Network Service Provider* must conduct an annual planning review with each *Distribution Network Service Provider connected* to its *transmission network* within each *region.* The annual planning review must incorporate the forecast *loads* submitted by the *Distribution Network Service Provider* in accordance with clause 5.6.1 or as modified in accordance with clause 5.6.1(d) and must include a review of the adequacy of existing *connection points* and relevant parts of the *transmission system* and planning proposals for future *connection points*.

(c) Where the necessity for *augmentation* or a non-network alternative is identified by the annual planning review conducted under clause 5.6.2(b), the relevant *Network Service Providers* must undertake joint planning in order to determine plans that can be considered by relevant *Registered Participants*, *NEMMCO* and *interested parties.*

(d) The minimum planning period for the purposes of the annual planning review is 5 years for *distribution networks* and 10 years for *transmission networks.*

(e) Each *Network Service Provider* must extrapolate the forecasts provided to it by *Registered Participants* for the purpose of planning and, where this analysis indicates that any relevant technical limits of the *transmission or*

distribution systems will be exceeded, either in normal conditions or following the contingencies specified in schedule 5.1, the *Network Service Provider* must notify any affected *Registered Participants* and *NEMMCO* of these limitations and advise those *Registered Participants* and *NEMMCO* of the expected time required to allow the appropriate corrective network *augmentation* or non-*network* alternatives, or modifications to *connection facilities* to be undertaken.

(f) Within the time for corrective action notified in clause 5.6.2(e) the relevant *Distribution Network Service Provider* must consult with affected *Registered Participants*, *NEMMCO* and *interested parties* on the possible options, including but not limited to demand side options, *generation* options and *market network service* options to address the projected limitations of the relevant *distribution system* except that a *Distribution Network Service Provider* does not need to consult on a *network* option which would be a *new small distribution network asset*.

(g) Each *Distribution Network Service Provider* must carry out an economic cost effectiveness analysis of possible options to identify options that satisfy the *regulatory test*, while meeting the technical requirements of schedule 5.1, and where the *Network Service Provider* is required by clause 5.6.2(f) to consult on the option this analysis and allocation must form part of the consultation on that option.

(h) Following conclusion of the process outlined in clauses 5.6.2(f) and (g), the *Distribution Network Service Provider* must prepare a report that is to be made available to affected *Registered Participants*, *NEMMCO* and *interested parties* which:

(1) includes assessment of all identified options;

(2) includes details of the *Distribution Network Service Provider's* preferred proposal and details of:

(A) its economic cost effectiveness analysis in accordance with clause 5.6.2(g); and

(B) its consultations conducted for the purposes of clause 5.6.2(g);

(3) summarises the submissions from the consultations; and

(4) recommends the action to be taken.

(i) *Registered Participants* may dispute the recommendation of the report prepared under clause 5.6.2(h) within 40 *business days* after the report is made available in respect of any proposal that is a *new large distribution network asset* or is reasonably likely to change the *distribution use of system service* charges applicable to that *Registered Participant* by more than 2% at

the date of the next price review, based on the assumption that the same approach to *distribution network* pricing is taken for the next review period as that taken for the current review period.

(j) Where any *Registered Participant* disputes a recommendation under clause 5.6.2(i), the *Distribution Network Service Provider* and the affected *Registered Participants* must negotiate in good faith with a view to reaching agreement on the action to be taken.

(k) Following:

(1) completion of the 40 *business day* period referred to in clause 5.6.2(i) or on resolution of any dispute in accordance with rule 8.2, in relation to proposals to which clause 5.6.2(j) applies; or

(2) completion of the report referred to in clause 5.6.2(h), in relation to any other *network* option recommended by the report,

the relevant *Distribution Network Service Provider* must arrange for the *network* options (if any) recommended by its report made in accordance with clause 5.6.2(h) to be available for service by the agreed time.

(k1) The *Distribution Network Service Provider* must include the cost of the relevant assets of the *network options* referred to in clause 5.6.2(k) in the calculation of *distribution service* prices determined in accordance with Chapter 6.

(l) If a *use of system service* or the provision of a service at a *connection point* is directly affected by a *transmission network* or *distribution network augmentation*, appropriate amendments to relevant *connection agreements* must be negotiated in good faith between the parties to them.

(m) Where the relevant *Transmission Network Service Provider* or *Distribution Network Service Provider* decides to implement a *generation* option as an alternative to *network augmentation*, the *Network Service Provider* must:

(1) register the *generating unit* with *NEMMCO* and specify that the *generating unit* may be periodically used to provide a *network* support function and will not be eligible to set *spot prices* when *constrained on* in accordance with clause 3.9.7; and

(2) include the cost of this *network* support service in the calculation of *transmission service* and *distribution service* prices determined in accordance with Chapter 6 or Chapter 6A, as the case may be.

(n) *NEMMCO* must provide to the *Inter-Regional Planning Committee*, and to other *Network Service Providers* on request, a copy of any report provided to *NEMMCO* by a *Network Service Provider* under clause 5.2.3(d)(12). If a *Registered Participant* reasonably considers that it is or may be adversely

affected by a development or change in another *region*, the *Registered Participant* may request the preparation of a report by the relevant *Network Service Provider* as to the technical impacts of the development or change. If so requested, the *Network Service Provider* must prepare such a report and provide a copy of it to *NEMMCO*, the *Registered Participant* requesting the report and, on request, any other *Registered Participant*.

5.6.2A Annual Planning Report

(a) By 30 June each year all *Transmission Network Service Providers* must *publish* an *Annual Planning Report* setting out the results of the annual planning review conducted in accordance with clause 5.6.2(a) and (b).

(b) The *Annual Planning Report* must set out:

(1) the forecast *loads* submitted by a *Distribution Network Service Provider* in accordance with clause 5.6.1 or as modified in accordance with clause 5.6.1(d);

(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;

(4) for all proposed *augmentations* to the *network* 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 clause 5.6.2A(b)(4)(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 the *Inter-regional Planning Committee* in accordance with clause 5.6.3(i) (if any such criteria have been *published* by the *Inter-regional Planning Committee*); and

(vi) other reasonable *network* and non-*network* options considered to address the actual or potential *constraint* or inability to meet the *network* performance requirements identified in clause 5.6.2A(b)(4)(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*;

(5) for all proposed *new small transmission network assets*:

(i) an explanation of the ranking of reasonable alternatives to the project including non-*network* alternatives. This ranking must be undertaken by the *Transmission Network Service Provider* in accordance with the principles contained in the *regulatory test*;

(ii) an *augmentation technical report* prepared by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(j) if, and only if, the asset is reasonably likely to have a *material inter-network impact* and the *Transmission Network Service Provider* has not received the consent to proceed with the proposed solution from all *Transmission Network Service* Providers whose *transmission networks* are materially affected by the *new small transmission network asset*. In assessing whether a *new small transmission network asset* is reasonably likely to have a *material inter-network impact*, a *Transmission Network Service Provider* must have regard to the objective set of criteria *published* by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(i) (if any such criteria have been *published* by the *Inter-regional Planning Committee*); and

(iii) analysis of why the *Transmission Network Service Provider* considers that the *new small transmission network asset* satisfies the *regulatory test* and, where the *Transmission Network Service Provider* considers that the *new small transmission network asset* satisfies the *regulatory test* as the *new small transmission network asset* is a *reliability augmentation*, analysis of why the *Transmission Network Service Provider* considers that the *new small transmission network asset* is a *reliability augmentation*. In assessing whether a *new small transmission network asset* is a *reliability augmentation*, a *Transmission Network Service Provider* must consider whether the *new small transmission*

network asset satisfies the criteria for a *reliability augmentation published* by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(l) (if any such criteria have been *published* by the *Inter-regional Planning Committee*); and.

(6) for all proposed *replacement transmission network assets*:

(i) a brief description of the new *replacement transmission network asset* project, including location;

(ii) the date from which the *Transmission Network Service Provider* proposes that the proposed new *replacement transmission network asset* will become operational;

(iii) the purpose of the proposed new *replacement transmission network asset*;

(iv) a list of any reasonable *network* or non-*network* alternatives to the proposed new *replacement transmission network asset* which are being, or have been, considered by the *Transmission Network Service Provider* (if any). Those alternatives include, but are not limited to, *interconnectors*, *generation* options, demand side options, *market network service* options and options involving other *transmission* or *distribution networks*; and

(v) the *Transmission Network Service Provider's* estimated total capitalised expenditure on the proposed new *replacement transmission network asset*.

5.6.3 Inter-regional planning committee

(a) *NEMMCO* must establish an *Inter-regional Planning Committee*. The functions of the *Inter-regional Planning Committee* include to:

(1) provide such assistance as *NEMMCO* reasonably requests in connection with the preparation of the *statement of opportunities*;

(2) provide such assistance as *NEMMCO* reasonably requests in connection with the carrying out of the *ANTS review*;

(3) *publish* an objective set of criteria for assessing whether a proposed *transmission network augmentation* is reasonably likely to have a *material inter-network impact* in accordance with clause 5.6.3(i);

(4) *publish augmentation technical reports* in accordance with clause 5.6.3(j);

(5) *publish* an objective set of criteria for assessing whether a proposed *new small transmission network asset* or *new large transmission network asset* is a *reliability augmentation*, in accordance with clause 5.6.3(l);

(6) *publish* guidelines to assist *Registered Participants* to determine when an *inter-network test* may be required, in accordance with clause 5.7.7(k);

(7) make recommendations to *NEMMCO* in relation to draft *test programs* in accordance with clause 5.7.7(o) and (q);

(8) provide advice to the *AEMC* as requested in relation to the exercise of the *last resort planning power*; and

(9) provide such assistance as *NEMMCO* reasonably requests in connection with the preparation of the report that is required to be provided by *NEMMCO* to the *Reliability Panel* in accordance with clause 3.13.3(u).

(b) The *Inter-regional Planning Committee* is to consist of:

(1) a *NEMMCO representative* as *Convener* of the *Inter-regional Planning Committee*;

(2) a *representative* from any entity that has been nominated by the relevant *Minister* of a *participating jurisdiction* as having *transmission system* planning responsibility in that *participating jurisdiction*; and

(3) such other persons appointed by *NEMMCO* that *NEMMCO* considers have the appropriate expertise to be members of the *Inter-regional Planning Committee*,

(4) for the purpose only of providing advice to the *AEMC* in relation to the exercise of the *last resort planning power*, persons appointed by *NEMMCO* at the request of the *AEMC* under clause 5.6.4(f),

provided that:

(5) a person appointed under clause 5.6.3(b)(2) must not take part in any decision or determination of the *Inter-regional Planning Committee* where the entity the person represents has a material financial interest in the matter to be decided or determined by the *Inter-regional Planning Committee*; and

(6) a member of the *Inter-regional Planning Committee* must not take part in providing advice to the *AEMC* for the purposes of the exercise of the *last resort planning power* under clause 5.6.4 where that

member has a material financial interest in the advice to be provided to the *AEMC*.

(c) A person appointed under clause 5.6.3(b)(2) will serve on the *Inter-regional Planning Committee* until such time as the relevant entity nominates a different person or the *Minister* of the *participating jurisdiction* who nominated the relevant entity notifies *NEMMCO* that another entity is to replace the previous entity as having *transmission system* planning responsibility in that *participating jurisdiction*.

(d) The term of office of members appointed under clause 5.6.3(b)(3) may be terminated at any time by *NEMMCO*.

(e) The *Inter-regional Planning Committee* must meet during the year at a frequency to be determined by the *Inter-regional Planning Committee*.

(f) The *Convener* of the *Inter-regional Planning Committee* must convene a meeting of the *Inter-regional Planning Committee* within a reasonable time after a reasonable request from a member of the *Inter-regional Planning Committee* is received setting out the business to be considered.

(g) *NEMMCO* and each entity from which a member of the *Inter-regional Planning Committee* has been appointed under clause 5.6.3(b)(2) must procure the availability of reasonable resources to enable the *Inter-regional Planning Committee* to carry out its responsibilities.

(h) *NEMMCO* and each entity from which a member of the *Inter-regional Planning Committee* has been appointed under clause 5.6.3(b)(2) must share the costs involved in conducting studies and analysis required to be undertaken by the *Inter-regional Planning Committee* under the *Rules* on a basis to be agreed between them.

(i) The *Inter-regional Planning Committee* must develop and *publish*, and may vary from time to time, an objective set of criteria for assessing whether or not a proposed *transmission network augmentation* is reasonably likely to have a *material inter-network impact*, in accordance with the *Rules consultation procedures*. In developing the objective set of criteria referred to in this clause, the *Inter-regional Planning Committee* must have regard to the relevant guiding objectives and principles provided by the *AEMC* in accordance with clause 5.6.3(n).

(j) Immediately upon receipt of a written request for an *augmentation technical report*, which must include sufficient information to enable the *Inter-regional Planning Committee* to carry out a review pursuant to this clause 5.6.3(j), together with payment of any reasonable fees to recover the *Inter-regional Planning Committee's* direct costs and expenses of the preparation of the *augmentation technical report*, the *Inter-regional Planning Committee* must:

(1) undertake a review of all matters referred to it by the *Transmission Network Service Provider* in order to assess the *augmentation* proposal and determine:

(i) the performance requirements for the equipment to be *connected*;

(ii) the extent and cost of *augmentations* and changes to all affected *transmission networks*; and

(iii) the possible material effect of the *new connection* on the *network power transfer capability* including that of other *transmission networks*;

(2) within 90 *business days*, or such other period as may be agreed by the *Transmission Network Service Provider* and the *Inter-Regional Planning Committee*, of receipt of such written request *publish* an *augmentation technical report*. The *Inter-Regional Planning Committee* must use reasonable endeavours to *publish* an *augmentation technical report* in as short a period as is reasonably practicable. The *augmentation technical report* must set out:

(i) the determinations of the *Inter-Regional Planning Committee* referred to in clause 5.6.3 (j)(1);

(ii) the information considered; and

(iii) the assumptions used.

(k) For the purposes of clause 5.6.3(j), the period in which the *Inter-regional Planning Committee* must *publish* an *augmentation technical report* will be automatically extended by the period of time taken by the *Transmission Network Service Provider* to provide additional information requested by the *Inter-regional Planning Committee*.

(l) The *Inter-regional Planning Committee* must develop and *publish*, and may vary from time to time, an objective set of criteria for assessing whether a proposed *new small transmission network asset* or *new large transmission network asset* is a *reliability augmentation*, in accordance with the *Rules consultation procedures*. In developing the objective set of criteria referred to in this clause, the *Inter-regional Planning Committee* must have regard to the relevant guiding objectives and principles provided by the *AEMC* in accordance with clause 5.6.3(n).

(m) Should the objective set of criteria referred to in clauses 5.6.3(i) or (l) be changed after an application notice (referred to in clause 5.6.6(c)) has been made available to *Registered Participants* and *NEMMCO*, in the case of a *new large transmission network asset*, or after the *publication* of the *Annual*

Planning Report, in the case of a *new small transmission network asset*, then the relevant *Network Service Provider* is entitled to choose whether the new criteria, or the criteria that existed at the time the application notice was made available to *Registered Participants* and *NEMMCO* or the *Annual Planning Report* was *published*, is to be applied.

(n) The *AEMC* must, in consultation with *NEMMCO*, provide the *Inter-regional Planning Committee* with guiding objectives and principles for the development by the *Inter-regional Planning Committee* of the criteria for assessing whether a proposed *transmission network augmentation* is reasonably likely to have a *material inter-network impact* and/or whether a proposed *new small transmission network asset* or *new large transmission network asset* is a *reliability augmentation* under clauses 5.6.3(i) and 5.6.3(l), respectively.

5.6.4 Last Resort Planning Power

(a) In this clause 5.6.4:

directed party means one or more *Registered Participants* directed by the *AEMC* in accordance with this clause 5.6.4 and may include:

(1) a single Registered Participant;

(2) two or more *Registered Participants* who are directed by the *AEMC* to jointly and co-operatively comply with a direction under paragraph (c).

direction notice is a notice issued under paragraph (i).

Purpose

(b) The purpose of a *last resort planning power* is to ensure timely and efficient *inter-regional transmission* investment for the long term interests of consumers of electricity.

AEMC last resort planning power

(c) The *AEMC* may, in accordance with this clause 5.6.4, direct one or more *Registered Participants*:

(1) to identify a *potential transmission project* and apply the *regulatory test* to that project; or

(2) to apply the *regulatory test* to a *potential transmission project* identified by the *AEMC*.

(d) The *AEMC* must exercise a *last resort planning power*:

(1) consistently with the purpose referred to in paragraph (b); and

(2) in accordance with the *last resort planning power guidelines.*

Advice from the Inter-regional Planning Committee

(e) The *AEMC* may request advice from the *Inter-regional Planning Committee* in relation to the exercise of the *last resort planning power*, in accordance with the *last resort planning power guidelines*.

(f) For the purpose only of providing advice to the *AEMC* in relation to the exercise of the *last resort planning power*, the *AEMC* may, in accordance with the *last resort planning power guidelines*, request *NEMMCO* to appoint up to 4 additional persons to the *Inter-regional Planning Committee* to:

(1) provide expertise and advice in relation to *generation* and *distribution* issues; and

(2) present the views of *Market Customers* and end user consumers of electricity.

Relevant considerations

(g) In deciding whether or not to exercise a *last resort planning power* the *AEMC* must take into account:

(1) advice provided by the *Inter-regional Planning Committee*;

(2) the two most recent *Annual National Transmission Statements*;

(3) *Annual Planning Reports* published by *Transmission Network Service Providers* under clause 5.6.2A; and

(4) other matters that are relevant in all the circumstances.

(h) In deciding whether or not to exercise the *last resort planning power* the *AEMC* must:

(1) identify a problem relating to *constraints* in respect of *national transmission flow paths* between *regional reference nodes* or a *potential transmission project* (**the problem** or **the project**);

(2) make reasonable inquiries to satisfy itself that there are no current processes underway for the application of the *regulatory test* in relation to the problem or the project;

(3) consider whether there are other options, strategies or solutions to address the problem or the project, and must be satisfied that all such

other options are unlikely to address the problem or the project in a timely manner;

(4) be satisfied that the problem or the project may have a significant impact on the efficient operation of the *market*; and

(5) be satisfied that but for the *AEMC* exercising the *last resort planning power*, the problem or the project is unlikely to be addressed.

Direction notice

(i) The *AEMC* must exercise a *last resort planning power* by giving a direction notice in writing to a directed party that states:

(1) the relevant action under paragraph (c) that the directed party is required to undertake; and

(2) the *AEMC's* reasons for exercising the *last resort planning power*.

(j) A direction notice given by the *AEMC* under paragraph (i) may specify one or more of the following:

(1) one or more alternative projects which a directed party must consider when applying the *regulatory test* to *potential transmission projects*;

(2) the time period within which the application of the *regulatory test* must be carried out by a directed party; or

(3) consultation and publication requirements that are in addition to those required by the *regulatory test*.

(k) The *AEMC* must *publish* the direction notice referred to in paragraph (i) on its website.

(l) A directed party must comply with:

(1) a direction notice;

(2) the requirements of the *last resort planning power guidelines*; and

(3) the requirements for the application of the *regulatory test*.

(m) If a directed party (an **earlier directed party**) fails to comply with a direction notice, the *AEMC* may:

(1) in accordance with this clause 5.6.4, give a direction notice to a *Registered Participant* other than the earlier directed party; and

(2) inform the *AER* of the earlier directed party's failure to comply with the direction notice.

Annual reporting for last resort planning power

(n) The *AEMC* must report annually on the matters which the *AEMC* has considered during that year in deciding whether or not to exercise the *last resort planning power*, and may include the information in its Annual Report published under s.27 of the Australian Energy Market Commission Establishment Act 2004 (South Australia).

Last resort planning power guidelines

(o) The *AEMC* must develop and *publish* guidelines ('the *last resort planning power guidelines*') for or with respect to:

(1) the processes to be followed by the *AEMC* in exercising the *last resort planning power*;

(2) a request to *NEMMCO* to appoint a person as an additional member of the *Inter-regional Planning Committee* as referred to in paragraph (f);

(3) the advice to be provided to the *AEMC* by the *Inter-regional Planning Committee*, including the terms of reference for any such advice;

(4) the matters that the *Inter-regional Planning Committee* and the *AEMC* may consider in recommending or nominating a person as an appropriate directed party; and

(5) the provision of information to the *AEMC* in relation to the exercise of the *last resort planning power*.

(p) The *AEMC* must develop and *publish* the *last resort planning power guidelines* in accordance with the *transmission consultation procedures*.

(q) The *AEMC* must develop and *publish* the first *last resort planning power guidelines* by 1 January 2008 and there must be such guidelines available at all times after that date.

(r) The *AEMC* may from time to time and in accordance with the *transmission consultation procedures*, amend or replace the *last resort planning power guidelines*.

5.6.5 Annual National Transmission Statement

(a) *NEMMCO* must each year conduct a review of:

(1) *national transmission flow paths*;

(2) forecast *constraints* in respect of *national transmission flow paths*;

(3) those options which, in *NEMMCO's* reasonable opinion, have the technical capability of relieving forecast *constraints* in respect of *national transmission flow paths*,

and prepare and *publish* an *Annual National Transmission Statement* by 31 October each year setting out the results of that review.

(b) *NEMMCO* must, in the course of conducting the *ANTS review*, consult with *Registered Participants* and *interested parties* in relation to:

(1) the data and assumptions to be used as part of the *ANTS review*; and

(2) the content of the *Annual National Transmission Statement*.

(c) In carrying out the *ANTS review*, *NEMMCO* must consider the following:

(1) the location of the current *national transmission flow paths* and the current capacities, *constraints* and congestion points on those flow paths;

(2) the location of the potential *national transmission flow paths* over the next 10 years, and the likely capacities, *constraints* and congestion points on those flow paths;

(3) the quantity of electricity which flowed, the periods in which the electricity flowed, and *constraints*, on the *national transmission flow paths* over the previous *financial year* or such other period as determined by *NEMMCO* having regard to data which is available to *NEMMCO*;

(4) the forecast quantity of electricity which is expected to flow, and the periods in which the electricity is expected to flow, the magnitude and significance of future *network losses* and *constraints* on the current and potential *national transmission flow paths* over the current *financial year* or such other period as determined by *NEMMCO* having regard to data which is available to *NEMMCO*;

(5) the projected capabilities of the existing *transmission network* and the *network control ancillary services* required to support existing and future *transmission network* capabilities;

(6) demand forecasts for the next 10 *financial years*;

(7) possible scenarios for additional *generation* and demand side options to meet demand forecasts;

(8) relevant intra-jurisdictional developments and any incremental works which may be needed to co-ordinate *national transmission flow path* planning with intra-jurisdictional planning;

(9) those *transmission network* options for relieving forecast *constraints* on the *national transmission flow paths*, which in *NEMMCO's* opinion, deliver technically feasible solutions that meet the projected capabilities, demands, congestion and capacity for the *generation* expansion scenarios, taking into account committed projects; and

(10) such other matters as *NEMMCO*, in consultation with the *participating jurisdictions*, considers are appropriate.

(d) In considering the matters described in clause 5.6.5(c), *NEMMCO* must have regard to:

(1) the *Annual Planning Reports published* in the year in which the *ANTS review* is being conducted; and

(2) information obtained for the purposes of preparing the *statement of opportunities* to be *published* in the year in which the *ANTS review* is being conducted,

and may include information from the *Annual Planning Reports* and the *statement of opportunities* in the *Annual National Transmission Statement*.

(e) In carrying out the *ANTS review*, *NEMMCO* may seek the assistance of the *Inter-regional Planning Committee*.

(f) *NEMMCO* may by written notice request an entity nominated under clause 5.6.3(b)(2) to provide *NEMMCO* with any additional information or documents reasonably available to it that *NEMMCO* reasonably requires for the purpose of the *ANTS review*.

(g) An entity nominated under clause 5.6.3(b)(2) must comply with a written notice from *NEMMCO* issued pursuant to clause 5.6.5(f).

(h) *NEMMCO* may only use information or documents provided in accordance with clauses 5.6.5(f) and 5.6.5(g) for the purpose of preparing the *Annual National Transmission Statement* or, where relevant, the *statement of opportunities*.

5.6.5A Regulatory Test

(a) The *AER* must develop and *publish* the *regulatory test* in accordance with this clause 5.6.5A.

(b) The purpose of the *regulatory test* is to identify *new network investments* or non-*network* alternative options that:

(1) maximise the net economic benefit to all those who produce, consume and transport electricity in the *market*; or

(2) in the event the option is necessitated to meet the service standards linked to the technical requirements of schedule 5.1 or in *applicable regulatory instruments*, minimise the present value of the costs of meeting those requirements.

(c) In so far as it relates to paragraph (b)(1), the *regulatory test* must:

(1) be based on a cost-benefit analysis of the future (which includes assessment of reasonable scenarios of future supply and demand conditions):

(i) were the *new network investment* to take place,

compared to the likely alternative option or options,

(ii) were the *new network investment* not to take place;

(2) as a minimum, list or provide for:

(i) the classes of possible benefits that may be included as benefits, and classes of possible benefits that may not be included as benefits;

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

(iii) the classes of possible costs that may be counted as costs, and classes of possible costs that may not be included as costs;

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

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

(3) ensure that the identification of the likely alternative option referred to in subparagraph (1) is informed by a consideration of all genuine and practicable alternative options to the proposed *new network investment* without bias regarding:

(i) energy source;

(ii) technology;

(iii) ownership;

(iv) the extent to which the *new network investment* or the non-*network* alternative enables *intra-regional* or *inter-regional* trading of electricity;

(v) whether it is a *network* or non-*network* alternative;

(vi) whether the *new network investment* or non-*network* alternative is intended to be regulated; or

(vii) any other factor;

(4) require, for a potential *new large transmission network asset*, that the *Network Service Provider publish*:

(i) a request for information as to the identity and detail of alternative options to the potential *new large transmission network asset*; and

(ii) details of the proposed *new large transmission network asset*;

(5) contain a requirement that where there is more than one likely alternative option to the *new network investment*, and no single alternative option is significantly more likely to occur than the other, then the cost-benefit analysis referred to in subparagraph (1) must be undertaken in relation to each such likely alternative option;

(6) not require the level of analysis to be disproportionate to the scale and size of the *new network investment*;

(7) be capable of predictable, transparent and consistent application; and

(8) provide that alternative options may include (without limitation) *generation*, demand side management, other *network* options, or the substitution of demand for electricity by the provision of alternative forms of energy.

Preparation, publication and amendment of regulatory test and regulatory test application guidelines

(d) At the same time as the *AER publishes* a proposed *regulatory test* under the *transmission consultation procedure*, the *AER* must also *publish* guidelines for the operation and application of the *regulatory test* ('the ***regulatory test* application guidelines**') in accordance with the requirements of this clause 5.6.5A.

(e) The *regulatory test* application guidelines must give effect to and be consistent with this clause 5.6.5A and provide guidance on the operation and application of the *regulatory test*.

(f) The *AER* must develop and *publish* the first *regulatory test* and *regulatory test* application guidelines under this clause 5.6.5A by 31 December 2007 and there must be a *regulatory test* and *regulatory test* application guidelines in force at all times after that date.

(g) The *AER* may, from time to time and in accordance with the *transmission consultation procedure*, amend or replace the *regulatory test* and *regulatory test* application guidelines developed and *published* under this clause, provided that such amendments must be *published* at the same time.

(h) An amendment as referred to in paragraph (g) does not apply to a current application of the *regulatory test* and the *regulatory test* application guidelines under the *Rules* (however described) by a *Network Service Provider*.

5.6.6 Applications to establish new large transmission network assets

(a) In addition to the procedures to establish a connection to a *network* in rule 5.3, applications to establish a *new large transmission network asset* must comply with the access arrangements and procedures set out in this clause 5.6.6.

(b) A person who proposes to establish a *new large transmission network asset* (the **applicant**) must consult all *Registered Participants*, *NEMMCO* and *interested parties* about the proposed *new large transmission network asset* in accordance with this clause 5.6.6.

(c) The applicant must make available to all *Registered Participants* and *NEMMCO* a notice (the **application notice**) which sets out, in relation to a proposed *new large transmission network asset*:

(1) a detailed description of:

(i) the proposed asset;

(ii) the reasons for proposing to establish the asset (including, where applicable, the actual or potential *constraint* or inability 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); and

(iii) all other reasonable *network* and non-*network* alternatives to address the identified *constraint* or inability to meet the *network* performance requirements identified in clause 5.6.6(c)(1)(ii). These alternatives include, but are not limited to, *interconnectors*, *generation* options, demand side options, *market network service* options and options involving other *transmission* and *distribution networks*;

(2) all relevant technical details concerning the proposed asset;

(3) the construction timetable and commissioning date for the asset;

(4) an analysis of the ranking of the proposed asset and all reasonable alternatives as referred to in clause 5.6.6(c)(1)(iii). This ranking must be undertaken by the applicant in accordance with the principles contained in the *regulatory test*;

(5) an *augmentation technical report* prepared by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(j) but only if:

(i) the asset is reasonably likely to have a *material inter-network impact*; and

(ii) the applicant has not received consent to proceed with such construction from all *Transmission Network Service Providers* whose *transmission networks* are materially affected by the asset; and

(6) a detailed analysis of why the applicant considers that the asset satisfies the *regulatory test* and, where the applicant considers that the asset satisfies the *regulatory test* as a *reliability augmentation*, analysis of why the applicant considers that the asset is a *reliability augmentation*.

(d) In assessing whether a *new large transmission network asset*:

(1) is reasonably likely to have a *material inter-network impact* for the purposes of clause 5.6.6(c)(5); or

(2) is a *reliability augmentation* for the purposes of clause 5.6.6(c)(6),

an applicant must have regard to the objective set of criteria *published* by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(i) or clause 5.6.3(l) (whichever is relevant), but only if any such criteria have been *published*.

(e) The applicant must provide a summary of the application notice to *NEMMCO*. Within 3 *business days* of receipt of the summary, *NEMMCO* must *publish* the summary on its website. The applicant must, upon request by an *interested party*, provide a copy of the application notice to that person within 3 *business days* of the request.

(f) Within 30 *business days* of *publication* of the summary of the application notice on *NEMMCO's* website, *interested parties* may make written submissions to the applicant on any matter in the application notice, and may request a meeting.

(g) The applicant must consider all submissions received in accordance with the requirements of clause 5.6.6(f) within a further 30 *business days*. The applicant must use its best endeavours to hold a meeting with *interested parties* who have requested such meeting, within a further 21 *business days* if:

(1) after having considered all submissions received in accordance with the requirements of clause 5.6.6(f), the applicant considers that it is necessary or desirable to hold a meetings; or

(2) a meeting is requested by 2 or more *interested parties*.

(h) The applicant must prepare a final report (**final report**) to be made available to all *Registered Participants*, *NEMMCO* and *interested parties* who responded to the application notice. The final report must set out the matters detailed in clause 5.6.6(c) and summarise the submissions received from *interested parties* and the applicant's response to each such submission.

(i) The applicant must provide to *NEMMCO* a summary of the final report, and *NEMMCO* must *publish* the summary on its website within 3 *business days* of its receipt.

Disputes in relation to certain matters

(j) *Registered Participants*, the *AEMC*, *Connection Applicants*, *Intending Participants*, *NEMMCO* and *interested parties* may, by a referral to the *AER*, dispute the final report but only in relation to the contents, assumptions, findings or recommendations of the final report with respect to:

(1) possible alternatives considered and their ranking under clause 5.6.6(c)(4);

(2) whether the *new large transmission network asset*:

(i) will have a *material inter-network impact*; and

(ii) will satisfy any criteria for a *material inter-network impact published* by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(i) that are in force at the time of preparation of the final report;

(3) the basis on which the applicant has assessed that the *new large transmission network asset* satisfies the *regulatory test* but only where that asset is not a *reliability augmentation*;

(4) whether the *new large transmission network asset* is a *reliability augmentation* and whether the asset satisfies the criteria for a *reliability augmentation published* by the *Inter-regional Planning*

Committee in accordance with clause 5.6.3(l) provided any such criteria had been *published* by the *Inter-regional Planning Committee* at the time of preparation of the final report; and

(5) the finding in the final report that the *new large transmission network asset* satisfies the *regulatory test* provided the asset is not a *reliability augmentation*,

and a dispute under this clause 5.6.6(j) may not be in relation to any matters set out in the final report which are treated as externalities by the *regulatory test*, or relate to an individual's personal detriment or property rights.

(k) A person disputing the final report under clause 5.6.6(j) (the **disputing party**) must:

(1) lodge notice of the dispute in writing (the **dispute notice**) with the *AER*;

(2) give a copy of the dispute notice to the applicant within 30 *business days* after publication of the summary of the final report on *NEMMCO's* website;

(3) specify in the dispute notice the grounds for the dispute in accordance with clause 5.6.6(j).

(l) The *AER* must resolve disputes referred under clause 5.6.6(j) by making a determination.

(m) In making a determination referred to in clause 5.6.6(l), the *AER*:

(1) must, subject to clauses 5.6.6(n) and (p), *publish* its determination in relation to disputes raised under clauses 5.6.6(j)(1)-(4) within 30 *business days* of receiving the dispute notice and in relation to a dispute raised in relation to clause 5.6.6(j)(5), within 120 *business days* of receiving notice of the dispute;

(2) must *publish* its reasons for making a determination;

(3) may disregard any matter raised by a party in the dispute that is misconceived or lacking in substance; and

(4) may request further information from a party bringing a dispute, or from the applicant, if the *AER* is not able to make a determination based on the information provided to it under clause 5.6.6(m).

(n) The *AER* may, with the written consent of the disputing parties, extend the period of time in which the *AER* must make a determination under paragraph (m), if the *AER* considers there are issues of sufficient complexity or difficulty involved.

Determination that new large transmission asset satisfies regulatory test

(o) Where a *new large transmission network asset* is not a *reliability augmentation* and the finding in the final report is not in dispute, the applicant may request in writing the *AER* to make a determination whether the *new large transmission network asset* satisfies the *regulatory test* and the *AER*:

(1) must, within 120 *business days* of receipt of the request from the applicant, subject to clause 5.6.6(p), make and *publish* a determination, including reasons;

(2) must use the findings and recommendations in the final report;

(3) may request further information from the applicant; and

(4) may have regard to any other matter the *AER* considers relevant.

(p) The relevant period of time in which the *AER* must make a determination under paragraphs (l) and (o) is automatically extended by the period of time taken by an applicant or a disputing party to provide any additional information requested by the *AER* under this clause 5.6.6, provided:

(1) the *AER* makes the request for the additional information at least 7 *business days* prior to the expiry of the relevant period; and

(2) the applicant or the disputing party provides the additional information within 14 *business days* of receipt of the request.

Costs determinations

(q) Where the *AER* engages a consultant to assist in making a determination under this clause 5.6.6, the *AER* may include a costs determination.

(r) Where a costs determination is made, the *AER* may:

(1) render the applicant an invoice for the costs; or

(2) determine that the costs should:

(i) be shared by all the parties to the dispute, whether in the same proportion or differing proportions; or

(ii) borne by a party or parties to the dispute other than the applicant whether in the same proportion or differing proportions; and

the *AER* may render invoices accordingly.

(s) If an invoice is rendered, the *AER* must specify a time period for the payment of the invoice that is no later than 30 *business days* from the date the *AER* makes a determination under clause 5.6.6.

5.6.6A Construction of new small transmission network assets

(a) Each *Transmission Network Service Provider* must consult with any *interested parties* on any matter relating to a proposed *new small transmission network asset* set out in the *Annual Planning Report*. *Interested parties* may make written submissions to the *Transmission Network Service Provider*. To be valid, a submission must be received within 20 *business days* of *publication* of the *Annual Planning Report*.

(b) At the conclusion of the consultation process in clause 5.6.6A(a):

(1) if there is any material change in the matters referred to in clauses 5.6.2A(b)(4) and (5) with respect to the *new small transmission network asset* as a result of the consultation process, the *Transmission Network Service Provider* must *publish* again the matters set out in clauses 5.6.2A(b)(4) and (5) in relation to such *new small transmission network asset*, incorporating the agreed or amended matters; and

(2) the *AER* must take into account the report *published* by the *Transmission Network Service Provider* in accordance with clause 5.6.6A(b)(1) and all material submitted to the *Transmission Network Service Provider* in the consultation process in the process of its determination of the *total revenue cap* for the *Transmission Network Service Provider* and whether the *new small transmission network asset* the subject of the consultation satisfies the *regulatory test*.

(c) In relation to a *new small transmission network asset* which was not identified in an *Annual Planning Report* or if a matter set out in the *Annual Planning Report* pursuant to clause 5.6.2A(b) has materially changed since the *publication* of the *Annual Planning Report* the *Transmission Network Service Provider* must prepare a report that is to be *published* to all *Registered Participants*, *NEMMCO* and *interested parties* which sets out the matters referred to in clauses 5.6.2A(b)(4) and (5) in relation to that *new small transmission network asset*.

(d) Each *Transmission Network Service Provider* must consult with any *interested parties* on any matter relating to a proposed *new small transmission network asset* set out in a report prepared pursuant to clause 5.6.6A(c). *Interested parties* may make written submissions to the *Transmission Network Service Provider*. To be valid, a submission must be received within 20 *business days* of publication of the report prepared pursuant to clause 5.6.6A(c).

(e) At the conclusion of the consultation process in clause 5.6.6A(d):

(1) if there is any material change in the matters referred to in clauses 5.6.2A(b)(4) and (5) with respect to the *new small transmission network asset* as a result of the consultation process the *Transmission Network Service Provider* must *publish* again the matters set out in clauses 5.6.2A(b)(4) and (5) in relation to such *new small transmission network asset*, incorporating the agreed or amended matters; and

(2) the *AER* must take into account the matters raised in the consultation process in its determination of the *total revenue cap* for the *Transmission Network Service Provider* and its determination of whether the *new small transmission network asset* the subject of the consultation satisfies the *regulatory test.*

5.6.6B Construction of Funded Augmentations

(a) The term *Transmission Network Service Provider* when used in this clause 5.6.6B is not intended to refer to, and is not to be read or construed as referring to, any *Transmission Network Service Provider* in its capacity as a *Market Network Service Provider*.

(b) A *Transmission Network Service Provider* who proposes to construct a *funded augmentation* must make available to all *Registered Participants* and *NEMMCO* a notice which must set out:

(1) a detailed description of the proposed *funded augmentation*;

(2) all relevant technical details concerning the proposed *funded augmentation*, the impact of the *funded augmentation* on the relevant *transmission network's Transmission Network Users* and the construction timetable and commissioning date for the *funded augmentation*;

(3) an *augmentation technical report* prepared by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(j) if, and only if, the *funded augmentation* is reasonably likely to have a *material inter-network impact* and the *Transmission Network Service Provider* has not received consent to proceed with construction from all *Transmission Network Service Providers* whose *transmission networks* are materially affected by the *funded augmentation*. In assessing whether a *funded augmentation* is reasonably likely to have a *material inter-network impact*, the *Transmission Network Service Provider* must have regard to the objective set of criteria *published* by the *Inter-regional Planning Committee* in accordance with clause 5.6.3(i) (if any such criteria have been *published* by the *Inter-regional Planning Committee*).

(c) The *Transmission Network Service Provider* must provide a summary of the notice prepared in accordance with clause 5.6.6B(b) to *NEMMCO*. Within 3 *business days* of receipt of the summary, *NEMMCO* must *publish* the summary on its website.

(d) The *Transmission Network Service Provider* must consult with any *interested parties*, in accordance with the *Rules consultation procedures*, on any matter set out in the notice prepared in accordance with clause 5.6.6B(b).

5.6.6C Review of total capitalised expenditure thresholds

(a) Every 3 years the *AER* must undertake a review (*the 'total capitalised expenditure threshold review'*) of the changes in the input costs used to calculate the *total capitalised expenditure thresholds*. The purpose of the review is to determine whether those amounts need to be changed to maintain the value of the *total capitalised expenditure thresholds* over time by adjustment to reflect any increase or decrease in the input costs for *new transmission network investment* since:

(1) [insert commencement date of Rule] in respect of the first *total capitalised expenditure threshold review*; and

(2) the date of the previous review in respect of every subsequent *total capitalised expenditure threshold review*.

(b) Each *total capitalised expenditure threshold review* is to be commenced by the *AER* on 31 July of the relevant year, with the first such review to be initiated in [insert year of first review].

(c) Within 6 weeks following the commencement of a *total capitalised expenditure threshold review* the *AER* must *publish* a draft determination outlining:

(1) whether or not the *AER* has formed the view that any of the *total capitalised expenditure thresholds* need to be amended to reflect increases or decreases in the input costs to ensure that the value of the *total capitalised expenditure thresholds* is maintained over time;

(2) its reasons for determining whether or not the *total capitalised expenditure thresholds* need to be varied to reflect increases or decreases in the input costs;

(3) if there is to be a variation in a *total capitalised expenditure threshold*, the amount of the new *total capitalised expenditure threshold* and the date the new *total capitalised expenditure threshold* will take effect; and

(4) its reasons for determining the amount of the new *total capitalised expenditure threshold*.

(d) At the same time as it *publishes* the draft determination under paragraph (c), the *AER* must *publish* a notice seeking submissions on the draft determination. The notice is to specify the period within which written submissions can be made (*the 'total capitalised expenditure threshold consultation period'*). The *total capitalised expenditure threshold consultation period* must be no longer than 5 weeks.

(e) The *AER* is to consider any written submissions received during the *total capitalised expenditure threshold consultation period* in making its final determination in respect of the matters outlined in paragraph (c). This final determination must be made and *published* by the *AER* within 5 weeks following the end of the *total capitalised expenditure threshold consultation period*.

(f) The new *total capitalised expenditure thresholds* (if any) will take effect to vary the then current *total capitalised expenditure thresholds* with effect from the relevant date specified in the *total capitalised expenditure threshold determination*.

5.7 Inspection and Testing

5.7.1 Right of entry and inspection

(a) If a *Registered Participant* who is party to a *connection agreement* reasonably believes that the other party to the *connection agreement* (being a party who is also a *Registered Participant*) is not complying with a technical provision of the *Rules* and that, as a consequence, the first *Registered Participant* is suffering, or is likely to suffer, a material adverse effect, then the first *Registered Participant* may enter the relevant *facility* at the *connection point* of the other *Registered Participant* in order to assess compliance by the other *Registered Participant* with its technical obligations under the *Rules*.

(b) A *Registered Participant* who wishes to inspect the *facilities* of another *Registered Participant* under clause 5.7.1(a) must give that other *Registered Participant* at least 2 *business days* notice of its intention to carry out an inspection.

(c) A notice given under clause 5.7.1(b) must include the following information:

(1) the name of the *representative* who will be conducting the inspection on behalf of the *Registered Participant*;

(2) the time when the inspection will commence and the expected time when the inspection will conclude; and

(3) the nature of the suspected non-compliance with the *Rules*.

(d) Neither a *Registered Participant* nor *NEMMCO* may carry out an inspection under this rule 5.7 within 6 *months* of any previous inspection except for the purpose of verifying the performance of corrective action claimed to have been carried out in respect of a non-conformance observed and documented on the previous inspection or (in the case of *NEMMCO*) for the purpose of reviewing an operating incident in accordance with clause 4.8.15.

(e) At any time when the *representative* of a *Registered Participant* is in another *Registered Participant's facility*, that *representative* must:

(1) cause no damage to the *facility;*

(2) only interfere with the operation of the *facility* to the extent reasonably necessary and approved by the relevant *Registered Participant* (such approval not to be unreasonably withheld or delayed); and

(3) observe "permit to test" access to sites and clearance protocols of the operator of the *facility*, provided that these are not used by the operator of the *facility* solely to delay the granting of access to site and inspection.

(f) Any *representative* of a *Registered Participant* conducting an inspection under this clause 5.7.1 must be appropriately qualified to perform the relevant inspection.

(g) The costs of inspections under this clause 5.7.1 must be borne by the *Registered Participant* requesting the inspection.

(h) *NEMMCO* or any of its *representatives* may, in accordance with this rule 5.7, inspect a *facility* of a *Registered Participant* and the operation and maintenance of that *facility* in order to:

(1) assess compliance by the relevant *Registered Participant* with its operational obligations under Chapter 3 or 4, or an *ancillary services agreement*;

(2) investigate any possible past or potential threat to *power system security*; or

(3) conduct any periodic familiarisation or training associated with the operational requirements of the *facility*.

(i) Any inspection under clause 5.7.1(a) or (h) must only be for so long as is reasonably necessary.

(j) Any equipment or goods installed or left on land or in premises of a *Registered Participant* after an inspection conducted under clause 5.7.1 do not become the property of the relevant *Registered Participant* (notwithstanding that they may be annexed or affixed to the relevant land or premises).

(k) In respect of any equipment or goods left on land or premises of a *Registered Participant* during or after an inspection, a *Registered Participant*:

(1) must not use any such equipment or goods for a purpose other than as contemplated in the *Rules* without the prior written approval of the owner of the equipment or goods;

(2) must allow the owner of any such equipment or goods to remove any such equipment or goods in whole or in part at a time agreed with the relevant *Registered Participant*, such agreement not to be unreasonably withheld or delayed; and

(3) must not create or cause to be created any mortgage, charge or lien over any such equipment or goods.

(l) A *Registered Participant* (in the case of an inspection carried out under clause 5.7.1(a)) or *NEMMCO* (in the case of an inspection carried out under clause 5.7.1(h)) must provide the results of that inspection to the *Registered Participant* whose *facilities* have been inspected, any other *Registered Participant* which is likely to be materially affected by the results of the test or inspection and *NEMMCO* (in the case of an inspection carried out under clause 5.7.1(a)).

5.7.2 Right of testing

(a) A *Registered Participant*, who has reasonable grounds to believe that equipment owned or operated by a *Registered Participant* with whom it has a *connection agreement* (which equipment is associated with the *connection agreement)* may not comply with the *Rules* or the *connection agreement*, may request testing of the relevant equipment by giving notice in writing to the other *Registered Participant*.

(b) If a notice is given under clause 5.7.2(a) the relevant test is to be conducted at a time agreed by *NEMMCO*.

(c) The *Registered Participant* who receives a notice under clause 5.7.2(a) must co-operate in relation to conducting tests requested under clause 5.7.2(a).

(d) The cost of tests requested under clause 5.7.2(a) must be borne by the *Registered Participant* requesting the test, unless the equipment is determined by the tests not to comply with the relevant *connection*

agreement and the *Rules*, in which case all reasonable costs of such tests must be borne by the owner of that equipment.

(e) Tests conducted in respect of a *connection point* under clause 5.7.2 must be conducted using test procedures agreed between the relevant *Registered Participants*, which agreement is not to be unreasonably withheld or delayed.

(f) Tests under clause 5.7.2 must be conducted only by persons with the relevant skills and experience.

(g) A *Transmission Network Service Provider* must give *NEMMCO* adequate prior notice of intention to conduct a test in respect of a *connection point* to that *Network Service Provider's network*.

(h) The *Registered Participant* who requests a test under this clause 5.7.2 may appoint a *representative* to witness a test and the relevant *Registered Participant* must permit a *representative* appointed under this clause 5.7.2(h) to be present while the test is being conducted.

(i) A *Registered Participant* who conducts a test must submit a report to the *Registered Participant* who requested the relevant test, *NEMMCO* and to any other *Registered Participant* which is likely to be materially affected by the results of the test, within a reasonable period after the completion of the test and the report is to outline relevant details of the tests conducted, including but not limited to the results of those tests.

(j) A *Network Service Provider* may attach test equipment or *monitoring equipment* to *plant* owned by a *Registered Participant* or require a *Registered Participant* to attach such test equipment or *monitoring equipment*, subject to the provisions of clause 5.7.1 regarding entry and inspection.

(k) In carrying out monitoring under clause 5.7.2(j) the *Network Service Provider* must not cause the performance of the monitored *plant* to be *constrained* in any way.

5.7.3 Tests to demonstrate compliance with connection requirements for generators

(a) Each *Generator* must, prior to implementing a compliance program in accordance with rule 4.15(b), provide evidence to any relevant *Network Service Provider* with which that *Generator* has a *connection agreement* and to *NEMMCO*, that its *generating system* complies with:

(1) the applicable technical requirements of clause S5.2.5; and

(2) the relevant *connection agreement* including the *performance standards*.

(b) Each *Generator* must negotiate in good faith with the relevant *Network Service Provider* and *NEMMCO* to agree on a compliance monitoring program, including an agreed method for its *generating system* to confirm ongoing compliance consistent with the evidence provided in paragraph (a).

(c) If prior to the *Generator* implementing a compliance program in accordance with the requirements of rule 4.15(b), a performance test or monitoring of in-service performance demonstrates that a *generating system* is not complying with one or more technical requirements of clause S5.2.5 and the relevant *connection agreement* or one or more of the *performance standards* then the *Generator* must:

(1) promptly notify the relevant *Network Service Provider* and *NEMMCO* of that fact;

(2) promptly advise the *Network Service Provider* and *NEMMCO* of the remedial steps it proposes to take and the timetable for such remedial work;

(3) diligently undertake such remedial work and report at monthly intervals to the *Network Service Provider* on progress in implementing the remedial action; and

(4) conduct further tests or monitoring on completion of the remedial work to confirm compliance with the relevant technical requirements or *performance standards* (as the case may be).

(d) If *NEMMCO* reasonably believes that a *generating system* is not complying with one or more applicable *performance standards* or one or more applicable technical requirements of clause S5.2.5 and the relevant *connection agreement, NEMMCO* may instruct the *Generator* to conduct tests within 25 *business days* to demonstrate that the relevant *generating system* complies with those *performance standards* or technical requirements.

(e) If the tests undertaken in accordance with paragraph (d) provide evidence that the *generating system* continues to comply with those requirements *NEMMCO* must reimburse the *Generator* for the reasonable expenses incurred as a direct result of conducting the tests.

(f) If *NEMMCO*:

(1) is satisfied that:

(i) a *generating system* is not complying with the relevant *performance standards* for that system in respect of one or more

of the technical requirements contained in S5.2.5, S5.2.6, S5.2.7 or S5.2.8 and the relevant *connection agreement*; or

(ii) a *generating system's* performance is not adequately represented by the applicable analytical model provided under clause 5.7.6(h) or clause S5.2.4; and

(2) holds the reasonable opinion that the performance of the *generating system*, or inadequacy of the applicable analytical model of the *generating system* is or will impede *NEMMCO's* ability to carry out its role in relation to *power system security*,

NEMMCO may direct the relevant *Generator* to operate the *generating system* at a particular *generated* output or in a particular mode until the relevant *Generator* submits evidence reasonably satisfactory to *NEMMCO* that the *generating system* is complying with the relevant *performance standard* and performing substantially in accordance with the applicable analytical model.

(g) Each *Generator* must maintain records for 7 years for each of its *generating systems* and *power stations* setting out details of the results of all technical performance and monitoring conducted under this clause 5.7.3 and make these records available to *NEMMCO* on request.

5.7.4 Routine testing of protection equipment

(a) A *Registered Participant* must co-operate with any relevant *Network Service Provider* to test the operation of equipment forming part of a *protection system* relating to a *connection point* at which that *Registered Participant* is *connected* to a *network* and the *Registered Participant* must conduct these tests:

(1) prior to the *plant* at the relevant *connection point* being placed in service; and

(2) at intervals specified in the *connection agreement* or in accordance with an asset management plan agreed between the *Network Service Provider* and the *Registered Participant*.

(a1) A *Network Service Provider* must institute and maintain a compliance program to ensure that its *facilities* of the following types, to the extent that the proper operation of a *facility* listed in this clause may affect *power system security*, operate reliably and in accordance with their performance requirements under schedule 5.1:

(1) *protection systems*;

(2) *control systems* for maintaining or enhancing *power system* stability;

(3) *control systems* for controlling *voltage* or *reactive power*; and

(4) *control systems* for *load shedding.*

(a2) A compliance program under clause 5.7.4(a1) must:

(1) include monitoring of the performance of the *facilities*;

(2) to the extent reasonably necessary, include provision for periodic testing of the performance of those *facilities* upon which *power system security* depends;

(3) provide reasonable assurance of ongoing compliance of the *facilities* with the relevant performance requirements of schedule 5.1; and

(4) be in accordance with *good electricity industry practice*.

(a3) A *Network Service Provider* must immediately notify *NEMMCO* if it reasonably believes that a *facility* of a type listed in clause 5.7.4(a1) does not comply with, or is likely not to comply with, its performance requirements.

(a4) A notice issued under clause 5.7.4(a3) must:

(1) identify the *facility* and the requirement with which the *facility* does not comply;

(2) give an explanation of the reason why the *facility* failed to comply with its performance requirement;

(3) give the date and time when the *facility* failed to comply with its performance requirement;

(4) give the date and time when the *facility* is expected to again comply with its performance requirement; and

(5) describe the expected impact of the failure on the performance of the *Network Service Provider's transmission system* or *distribution system.*

(b) Each *Registered Participant* must bear its own costs of conducting tests under this clause 5.7.4.

5.7.5 Testing by Registered Participants of their own plant requiring changes to normal operation

(a) A *Registered Participant* proposing to conduct a test on equipment related to a *connection point*, which requires a change to the normal operation of

that equipment, must give notice in writing to the relevant *Network Service Provider* of at least 15 *business days* except in an emergency.

(b) The notice to be provided under clause 5.7.5(a) must include:

(1) the nature of the proposed test;

(2) the estimated start and finish time for the proposed test;

(3) the identity of the equipment to be tested;

(4) the *power system* conditions required for the conduct of the proposed test;

(5) details of any potential adverse consequences of the proposed test on the equipment to be tested;

(6) details of any potential adverse consequences of the proposed test on the *power system*; and

(7) the name of the person responsible for the co-ordination of the proposed test on behalf of the *Registered Participant*.

(c) The *Network Service Provider* must review the proposed test described in a notice provided under clause 5.7.5(a) to determine whether the test:

(1) could adversely affect the normal operation of the *power system*;

(2) could cause a threat to *power system security*;

(3) requires the *power system* to be operated in a particular way which differs from the way in which the *power system* is normally operated; or

(4) could affect the normal *metering* of *energy* at a *connection point*.

(d) If the *Network Service Provider* determines that the proposed test does fulfil one of the conditions specified in clause 5.7.5(c), then the *Registered Participant* and *Network Service Provider* must seek *NEMMCO's* approval prior to undertaking the test, which approval must not be unreasonably withheld or delayed.

(e) If, in *NEMMCO's* reasonable opinion, a test could threaten public safety, damage or threaten to damage equipment or adversely affect the operation of the *power system*, *NEMMCO* may direct that the proposed test procedure be modified or that the test not be conducted at the time proposed.

(f) *NEMMCO* must advise *Network Service Providers* of any test which may have a possible effect on normal *metering* of *energy* at a *connection point.*

(g) *NEMMCO* must advise any other *Registered Participants* who might be adversely affected by a proposed test and consider any reasonable requirements of those *Registered Participants* when approving the proposed test.

(h) The *Registered Participant* who conducts a test under this clause 5.7.5 must ensure that the person responsible for the co-ordination of a test promptly advises *NEMMCO* when the test is complete.

(i) If *NEMMCO* approves a proposed test, *NEMMCO* must use its reasonable endeavours to ensure that *power system* conditions reasonably required for that test are provided as close as is reasonably practicable to the proposed start time of the test and continue for the proposed duration of the test.

(j) Within a reasonable period after any such test has been conducted, the *Registered Participant* who has conducted a test under this clause 5.7.5 must provide the *Network Service Provider* with a report in relation to that test including test results where appropriate.

5.7.6 Tests of generating units requiring changes to normal operation

(a) A *Network Service Provider* may, at intervals of not less than 12 months per *generating system*, require the testing by a *Generator* of any *generating unit connected* to the *network* of that provider in order to determine analytic parameters for modelling purposes or to assess the performance of the relevant *generating unit* or *generating system* for the purposes of a *connection agreement*, and that provider is entitled to witness such tests.

(b) If *NEMMCO* reasonably considers that:

(1) the analytic parameters for modelling of a *generating unit* or *generating system* are inadequate; or

(2) available information, including results from a previous test of a *generating unit* or *generating system*, are inadequate to determine parameters for an applicable model developed in accordance with the *Generating System Model Guidelines*, or otherwise agreed with *NEMMCO* under clause S5.2.4(c)(2),

NEMMCO may direct a *Network Service Provider* to require a *Generator* to conduct a test under paragraph (a), and *NEMMCO* may witness such a test.

(c) Adequate notice of not less than 15 *business days* must be given by the *Network Service Provider* to the *Generator* before the proposed date of a test under paragraph (a).

(d) The *Network Service Provider* must use its best endeavours to ensure that tests permitted under this clause 5.7.6 are conducted at a time which will

minimise the departure from the *commitment* and *dispatch* that are due to take place at that time.

(e) If not possible beforehand, a *Generator* must conduct a test under this clause 5.7.6 at the next scheduled *outage* of the relevant *generating unit* and in any event within 9 months of the request.

(f) A *Generator* must provide any reasonable assistance requested by the *Network Service Provider* in relation to the conduct of tests.

(g) Tests conducted under this clause 5.7.6 must be conducted in accordance with test procedures agreed between the *Network Service Provider* and the relevant *Generator* and a *Generator* must not unreasonably withhold its agreement to test procedures proposed for this purpose by the *Network Service Provider*.

(h) A *Generator* must provide the test records obtained from a test under paragraph (a) to the *Network Service Provider*, who must derive the analytical parameters for the applicable model developed in accordance with the *Generating System Model Guidelines*, or otherwise agreed with *NEMMCO* under clause S5.2.4(c)(2) and provide them to *NEMMCO* and the relevant *Generator*.

(i) The *Generator*, the *Network Service Provider* and *NEMMCO* must each bear its own costs associated with tests conducted under this clause 5.7.6 and no compensation is to be payable for financial losses incurred as a result of these tests or associated activities.

5.7.7 Inter-network power system tests

(a) For each kind of development or activity described in the first column of chart 1 below, the *Proponent* is as set out in the second column and the *Relevant Transmission Network Service Provider* ("*Relevant TNSP*") is as set out in the third column, respectively, opposite the description of the development or activity.

Chart 1

No.	**Kind of development or activity**	***Proponent***	***Relevant TNSP***
	column 1	**column 2**	**column 3**
1.	A new *transmission line* between two *networks*, or within a *transmission network*, that is anticipated	*Network Service Provider* in respect of the new *transmission line*.	*Proponent* and the *Transmission Network Service Provider* in respect of any *network* to which

No.	**Kind of development or activity**	***Proponent***	***Relevant TNSP***
	column 1	**column 2**	**column 3**
	to have a *material inter-network impact* is commissioned.		the *transmission line* is *connected*.
2.	An existing *transmission line* between two *networks*, or within a *transmission network*, that is anticipated to have a *material inter-network impact* is *augmented* or substantially modified.	*Network Service Provider* in respect of the *augmentation* or modification of the *transmission line*.	*Proponent* and the *Transmission Network Service Provider* in respect of any *network* to which the *transmission line* is *connected*.
3.	A new *generating unit* or *facility* of a *Customer* or a *network* development is commissioned that is anticipated to have a *material inter-network impact*.	*Generator* in respect of the *generating unit* and associated *connection assets*. *Customer* in respect of the *facility* and associated *connection assets*. *Network Service Provider* in respect of the relevant *network*.	*Transmission Network Service Provider* in respect of any *network* to which the *generating unit*, *facility* or *network* development is *connected* and, if a *network* development, then also the *Proponent*.
4.	Setting changes are made to any *power system* stabilisers as a result of a *generating unit*, *facility* of a *Customer* or *network* development being commissioned, modified or replaced.	*Generator* in respect of the *generating unit*. *Customer* in respect of the *facility*. *Network Service Provider* in respect of the relevant *network*.	*Transmission Network Service Provider* in respect of any *transmission network* to which the *generating unit*, *facility* or *network* development is *connected*.

No.	Kind of development or activity	*Proponent*	*Relevant TNSP*
	column 1	**column 2**	**column 3**
5.	Setting changes are made to any *power system* stabilisers as a result of a decision by the *Inter-regional Planning Committee* or *NEMMCO*, which are not covered by item 4 in this chart.	*NEMMCO*.	None.
6.	*NEMMCO* determines that a test is required to verify the performance of the *power system* in light of the results of planning studies or simulations or one or more system incidents.	*NEMMCO*.	None.

(b) A *Registered Participant*, not being a *Transmission Network Service Provider*, determined in accordance with clause 5.7.7(a) to be a *Proponent* for a development or activity detailed in chart 1, may require the *Relevant TNSP* corresponding to that development or activity to undertake on their behalf their obligations as the *Proponent* and, where the *Relevant TNSP* receives a written request to undertake those obligations, the *Relevant TNSP* must do so.

(c) Where, in this clause 5.7.7, there is a reference to a *Proponent* that reference includes a *Relevant TNSP* required in accordance with clause 5.7.7(b) to undertake the obligations of another *Registered Participant*.

(d) If a *Relevant TNSP* is required by a *Registered Participant* in respect of a *scheduled generating unit*, a *semi-scheduled generating unit*, a *scheduled load* or a *market network service*, any of which have a *nameplate rating* in excess of 30 MW, to act as a *Proponent* in accordance with clause 5.7.7(b), that *Relevant TNSP* is entitled to recover all reasonable costs incurred from the *Registered Participant* that required the *Relevant TNSP* to act as the *Proponent*.

(e) A *Registered Participant* wishing to undertake a development or conduct an activity listed in item 1, 2, 3 or 4 of chart 1 must notify *NEMMCO* not less than 80 *business days* before the *transmission line*, *generating unit*, *facility*

or *network* development is planned to be commissioned, modified or replaced, giving details of the development or activity.

(f) If *NEMMCO* receives a notice under clause 5.7.7(e), then it must provide a copy of the notice to each member of the *Inter-regional Planning Committee* and consult with the *Inter-regional Planning Committee* about the potential impact of the development or activity.

(g) *NEMMCO* or the *Relevant TNSP* in respect of a development or activity may notify the *Proponent* of the development or activity that *NEMMCO* or the *Relevant-TNSP* believes that an *inter-network test* is required in relation to that development or activity.

(h) *NEMMCO* or the *Relevant TNSP* may only give a notice under clause 5.7.7(g) if *NEMMCO* or the *Relevant TNSP* considers that:

(1) the development or activity may have a material impact on the magnitude of the *power transfer capability* of more than one *transmission network* and, in the circumstances, an *inter-network test* is required; or

(2) if the *Inter-regional Planning Committee* has *published* guidelines under clause 5.7.7(k), an *inter-network test* is required having regard to those guidelines and the surrounding circumstances.

(i) If *NEMMCO* or the *Relevant TNSP* gives a notice under clause 5.7.7(g), then they must also promptly give a copy of the notice to each member of the *Inter-regional Planning Committee*.

(j) A *Registered Participant* undertaking a development or activity listed in chart 1 must provide such information to *NEMMCO* or the *Relevant TNSP* in respect of the development or activity as *NEMMCO* or the *Relevant TNSP* reasonably requests in order to make an assessment under this clause 5.7.7.

(k) The *Inter-regional Planning Committee* may develop, *publish* and amend from time to time, in accordance with the *Rules consultation procedures*, a set of guidelines to assist *Registered Participants* to determine when an *inter-network test* may be required.

(l) If the *Inter-regional Planning Committee* has *published* guidelines in accordance with clause 5.7.7(k), then *NEMMCO* and the *Relevant TNSP* must consider those guidelines in determining whether an *inter-network test* is required under clause 5.7.7(g) or 5.7.7(n).

(m) If *NEMMCO* or the *Relevant TNSP* gives notice under clause 5.7.7(g), then the *Proponent* must, in consultation with *NEMMCO*, prepare a draft *test program* for the *inter-network test* and submit it to each member of the

Inter-regional Planning Committee and the *Relevant TNSP* (if the *Relevant TNSP* gave the notice given under clause 5.7.7(g)).

(n) If *NEMMCO* determines that an *inter-network test* is required for a reason contemplated in item 5 or 6 of chart 1, then it must prepare a draft *test program* for the *inter-network test* and submit it to each member of the *Inter-regional Planning Committee* at least 40 *business days* prior to the proposed test.

(o) The *Inter-regional Planning Committee* must:

(1) meet within 15 *business days* of the members receiving a draft *test program* under clauses 5.7.7(m) or (n); and

(2) within a period of not more than 10 *business days* make a recommendation to *NEMMCO* on the draft *test program* that identifies changes the *Inter-regional Planning Committee* proposes to the *test program*.

(p) *NEMMCO* must:

(1) *publish* a copy of the draft *test program* and any relevant changes recommended by the *Inter-regional Planning Committee* and invite interested *Registered Participants* to make written submissions;

(2) only accept as valid submissions received not later than the date specified in the notice *publishing* the copy of the draft *test program* (not to be less than 14 *days* after the date of *publication*); and

(3) provide the *Inter-regional Planning Committee* with copies of all valid submissions and seek its final recommendation.

(q) The *Inter-regional Planning Committee* must consider and take into account all valid submissions received and may amend its recommendation.

(r) *NEMMCO* must determine and *publish* in accordance with clause 3.13.13 the *test program* for an *inter-network test* after taking into account the draft *test program* submitted to the *Inter-regional Planning Committee*, the *Inter-regional Planning Committee's* recommendation and any valid submissions received from *Registered Participants*.

(s) In making a recommendation under clause 5.7.7(o) and in determining the *test program*, the *Inter-regional Planning Committee* and *NEMMCO* must so far as practicable have regard to the following principles:

(1) *power system security* must be maintained in accordance with Chapter 4;

(2) the variation from the *central dispatch* outcomes that would otherwise occur if there was no *inter-network test* should be minimised;

(3) the duration of the tests should be as short as possible consistent with test requirements and *power system security*; and

(4) subject to clauses 5.7.7(s)(1), (2) and (3), the test facilitation costs borne or payable under clause 5.7.7 (aa) by the *Proponent* should be minimised.

(t) An *inter-regional test* must not be conducted within 20 *business days* after *NEMMCO publishes* the *test program* for the *inter-network test* determined by *NEMMCO* under clause 5.7.7(r).

(u) The *Proponent* in respect of an *inter-network test* must seek to enter into agreements with other *Registered Participants* to provide the test facilitation services identified in the *test program* in order to ensure that the *power system* conditions required by the *test program* are achieved.

(v) If the *Proponent* approaches another *Registered Participant* seeking to enter into an agreement under clause 5.7.7(u) then the *Proponent* and the *Registered Participant* must negotiate in good faith concerning the provision of the relevant test facilitation service.

(w) If:

(1) a *Proponent* approaches another *Registered Participant* as described in clause 5.7.7(v); and

(2) the *Proponent* and the other *Registered Participant* have not agreed the terms and conditions to be included in the agreement under which the *Registered Participant* will provide the test facilitation service requested within 15 *business days* of the approach,

then those terms and conditions must be determined in accordance with rule 8.2 and a dispute of this type is deemed to fall within clause 8.2.5(c)(2).

(x) If the dispute concerns the price which the *Proponent* is to pay for a test facilitation service, then it must be resolved applying the following principles:

(1) the other *Registered Participant* is entitled to recover the costs it incurs, and a reasonable rate of return on the capital it employs, in providing the test facilitation service, determined taking into account the additional costs associated with:

(i) maintaining the equipment necessary to provide the test facilitation service;

(ii) any labour required to operate and maintain the equipment used to provide the test facilitation service; and

(iii) any materials consumed when the test facilitation service is utilised; and

(2) the other *Registered Participant* is entitled to be compensated for any commercial opportunities foregone by providing the test facilitation service.

(y) When the terms and conditions are determined in accordance with rule 8.2 under this clause 5.7.7, then the *Proponent* and the other *Registered Participant* must enter into an agreement setting out those terms and conditions.

(z) If *NEMMCO* is not the *Proponent* in respect of an *inter-network test*, the *Proponent* must:

(1) prior to the scheduled date of the *inter-network test*, confirm to *NEMMCO* that the test facilitation services identified in the *test program* will be available to be utilised, who will be providing them and the operational arrangements for utilising them;

(2) provide sufficient information to enable *NEMMCO* to utilise the test facilitation services in conducting the *inter-network test*; and

(3) respond promptly to any queries *NEMMCO* raises with the *Proponent* concerning the availability of the test facilitation services and *NEMMCO's* ability to utilise those services in conducting the *inter-network tests*.

(aa) The *Proponent* in respect of an *inter-network test* must bear all of the following costs associated with that *inter-network test*:

(1) any amounts payable under an agreement under which test facilitation services are provided;

(2) the *Proponent's* own costs associated with the *inter-network test* and in negotiating and administering the agreements referred to in clause 5.7.7(u); and

(3) if the *Proponent* is not *NEMMCO* and the amount of *settlements residue* on any *directional interconnector* for a *trading interval* during which there is an impact on *central dispatch* outcomes as a result of the *inter-network test* is negative, then the *Proponent* must enter into an agreement with *NEMMCO* to pay that amount to *NEMMCO*.

(ab) If the *Proponent* is *NEMMCO* and the amount of *settlements residue* on any *directional interconnector* for a *trading interval* during which there is an

impact on *central dispatch* outcomes as a result of the *inter-network test* is negative, then *NEMMCO* must adjust that residue to be zero and must recover the amount as provided for in clause 2.11.3(b)(2A).

(ac) *NEMMCO* must establish operational conditions to achieve the particular *power transfer* levels for each stage of the *inter-network test* as contemplated by the *test program*:

(1) utilizing where practicable and economic to do so the test facilitation services identified in the *test program*; and

(2) otherwise, by applying to the minimum extent necessary to fulfil the test requirements, *inter-network testing constraints*.

(ad) An *inter-network test* must be coordinated by an officer nominated by the *Inter-regional Planning Committee* who has authority to stop the test or any part of it or vary the procedure within pre-approved guidelines determined by the *Inter-regional Planning Committee* if that officer considers any of these actions to be reasonably necessary.

(ae) Each *Registered Participant* must:

(1) cooperate with *NEMMCO* in planning, preparing for and conducting *inter-regional tests*;

(2) act in good faith in respect of, and not unreasonably delay, an *inter-network test*; and

(3) comply with any instructions given to it by *NEMMCO* under clause 5.7.7(af).

(af) *NEMMCO* may utilise test facilitation services under agreements entered into by the *Proponent* under this clause 5.7.7 during an *inter-network test* in order to achieve operational conditions on the *power system* which are reasonably required to achieve valid test results.

5.8 Commissioning

5.8.1 Requirement to inspect and test equipment

(a) A *Registered Participant* must ensure that any of its new or replacement equipment is inspected and tested to demonstrate that it complies with relevant *Australian Standards*, the *Rules* and any relevant *connection agreement* prior to or within an agreed time after being *connected* to a *transmission network* or *distribution network*, and the relevant *Network Service Provider* is entitled to witness such inspections and tests.

(b) The *Registered Participant* must produce test certificates on demand by the relevant *Network Service Provider* showing that the equipment has passed the tests and complies with the standards set out in clause 5.8.1(a) before *connection* to a *network*, or within an agreed time thereafter.

5.8.2 Co-ordination during commissioning

A *Registered Participant* seeking to *connect* to a *network* must co-operate with the relevant *Network Service Provider*(s) and *NEMMCO* to develop procedures to ensure that the commissioning of the *connection* and *connected facility* is carried out in a manner that:

(a) does not adversely affect other *Registered Participants* or affect *power system security* or quality of *supply* of the *power system*; and

(b) minimises the threat of damage to any other *Registered Participant's* equipment.

5.8.3 Control and protection settings for equipment

(a) Not less than 3 months prior to the proposed commencement of commissioning by a *Registered Participant* of any new or replacement equipment that could reasonably be expected to alter performance of the *power system* (other than replacement by identical equipment), the *Registered Participant* must submit to the relevant *Network Service Provider* sufficient design information including proposed parameter settings to allow critical assessment including analytical modelling of the effect of the new or replacement equipment on the performance of the *power system*.

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

(1) consult with other *Registered Participants* and *NEMMCO* as appropriate; and

(2) within 20 *business days* of receipt of the design information under clause 5.8.3(a), notify the *Registered Participant* and *NEMMCO* of any comments on the proposed parameter settings for the new or replacement equipment.

(c) If the *Network Service Provider's* comments include alternative parameter settings for the new or replacement equipment, then the *Registered Participant* must notify the *Network Service Provider* that it either accepts or disagrees with the alternative parameter settings suggested by the *Network Service Provider*.

(d) The *Network Service Provider* and the *Registered Participant* must negotiate parameter settings that are acceptable to them both and if there is

any unresolved disagreement between them, the matter must be referred to the *Inter-regional Planning Committee* whose majority decision must be given within 20 *business days* of referral of the dispute and, once a decision is given, it is to be final.

(e) The *Registered Participant* and the *Network Service Provider* must co-operate with each other to ensure that adequate grading of protection is achieved so that faults within the *Registered Participant's facility* are cleared without adverse effects on the *power system*.

5.8.4 Commissioning program

(a) Prior to the proposed commencement of commissioning by a *Registered Participant* of any new or replacement equipment that could reasonably be expected to alter performance of the *power system*, the *Registered Participant* must advise the relevant *Network Service Provider* and *NEMMCO* in writing of the commissioning program including test procedures and proposed test equipment to be used in the commissioning.

(b) Notice under clause 5.8.4(a) must be given not less than 3 months prior to commencement of commissioning for a *connection* to a *transmission network* and not less than 1 month prior to commencement of commissioning for a *connection* to a *distribution network*.

(c) The relevant *Network Service Provider* and *NEMMCO* must, within 15 *business days* of receipt of such advice under clause 5.8.4(a), notify the *Registered Participant* either that they:

(1) agree with the proposed commissioning program; or

(2) require changes to it in the interest of maintaining *power system security*, safety or quality of *supply*.

(d) If the relevant *Network Service Provider* or *NEMMCO* require changes to the proposed commissioning program, then the parties must co-operate to reach agreement and finalise the commissioning program within a reasonable period.

(e) A *Registered Participant* must not commence the commissioning until the commissioning program has been finalised and the relevant *Network Service Provider* and *NEMMCO* must not unreasonably delay finalising a commissioning program.

5.8.5 Commissioning tests

(a) The relevant *Network Service Provider* and/or *NEMMCO* has the right to witness commissioning tests relating to new or replacement equipment that

could reasonably be expected to alter performance of the *power system* or the accurate *metering* of *energy*.

(b) The relevant *Network Service Provider* must, within a reasonable period of receiving advice of commissioning tests, notify the *Registered Participant* whose new or replacement equipment is to be tested under this clause 5.8.5 whether or not it:

(1) wishes to witness the commissioning tests; and

(2) agrees with the proposed commissioning times.

(c) A *Registered Participant* whose new or replacement equipment is tested under this clause 5.8.5 must submit to the relevant *Network Service Provider* the commissioning test results demonstrating that a new or replacement item of equipment complies with the *Rules* or the relevant *connection agreement* or both to the satisfaction of the relevant *Network Service Provider*.

(d) If the commissioning tests conducted in relation to a new or replacement item of equipment demonstrates non-compliance with one or more requirements of the *Rules* or the relevant *connection agreement* then the *Registered Participant* whose new or replacement equipment was tested under this clause 5.8.5 must promptly meet with the *Network Service Provider* to agree on a process aimed at achievement of compliance of the relevant item with the *Rules*.

(e) On request by a *Network Service Provider*, *NEMMCO* may direct that the commissioning and subsequent *connection* of the *Registered Participant's* equipment must not proceed if the relevant equipment does not comply with the requirements described in clause 5.8.1(a).

5.9 Disconnection and Reconnection

5.9.1 Voluntary disconnection

(a) Unless agreed otherwise and specified in a *connection agreement*, a *Registered Participant* must give to the relevant *Network Service Provider* notice in writing of its intention to permanently *disconnect* a *facility* from a *connection point*.

(b) A *Registered Participant* is entitled, subject to the terms of the relevant *connection agreement*, to require voluntary permanent *disconnection* of its equipment from a *network* in which case appropriate operating procedures necessary to ensure that the *disconnection* will not threaten *power system security* must be implemented in accordance with clause 5.9.2.

(c) The *Registered Participant* must pay all costs directly attributable to the voluntary *disconnection* and *decommissioning*.

5.9.2 Decommissioning procedures

(a) In the event that a *Registered Participant's facility* is to be permanently *disconnected* from a *network*, whether in accordance with clause 5.9.1 or otherwise, the *Network Service Provider* and the *Registered Participant* must, prior to such *disconnection* occurring, follow agreed procedures for *disconnection*.

(b) The *Network Service Provider* must notify *NEMMCO* and any *Registered Participants* with whom it has a *connection agreement* if it believes, in its reasonable opinion, the terms and conditions of such a *connection agreement* will be affected by procedures for *disconnection* or proposed procedures agreed with any other *Registered Participant.* The parties must negotiate any amendments to the procedures for *disconnection* or the *connection agreement* that may be required.

(c) Any *disconnection* procedures agreed to or determined under clause 5.9.2(a) must be followed by all relevant *Network Service Providers* and *Registered Participants*.

5.9.3 Involuntary disconnection

(a) *NEMMCO* may direct a *Network Service Provider* to, or a *Network Service Provider* may (either on its own initiative or in accordance with a direction from *NEMMCO*), *disconnect* a *Registered Participant's facilities* from a *network*, or a *Registered Participant's market loads*, in the following circumstances:

(1) pursuant to a direction for a *disconnection* made by a court under section 62 or 63 of the *National Electricity Law* or pursuant to regulations made under section 44AAG of the Trade Practices Act 1974 (Cth);

(2) during an emergency in accordance with clause 5.9.5;

(3) in accordance with the *National Electricity Law*; or

(4) in accordance with the provisions of the *Registered Participant's connection agreement.*

(b) In all cases of *disconnection* by a *Network Service Provider* at *NEMMCO's* direction during an emergency in accordance with clause 5.9.5, *NEMMCO* must undertake a review under clause 4.8.15 and *NEMMCO* must then provide a report to the *Registered Participant*, the *AEMC* and the *AER* advising of the circumstances requiring such action.

(c) A *Network Service Provider* that has received a direction from *NEMMCO* under this clause 5.9.3 must comply with that direction promptly.

5.9.4 Direction to disconnect

(a) Where a *disconnection* is made pursuant to clause 5.9.3(a)(1), neither *NEMMCO* nor the relevant *Network Service Provider* is liable in any way for any loss or damage suffered or incurred by the *Registered Participant* by reason of the *disconnection* and neither *NEMMCO* nor the relevant *Network Service Provider* is obliged for the duration of the *disconnection* to fulfil any agreement to convey electricity to or from the *Registered Participant's facility.*

(b) A *Registered Participant* must not bring proceedings against *NEMMCO* or a *Network Service Provider* to seek to recover any amount for any loss or damage described in clause 5.9.4(a).

(c) *Transmission service* charges and *distribution service* charges must be paid by a *Registered Participant* whose *facilities* have been *disconnected* under this clause 5.9.4 as if any *disconnection* had not occurred.

(d) A *Network Service Provider* that has received a direction from *NEMMCO* to *disconnect* a *Registered Participant's facilities* in the circumstances described in clause 5.9.3(a)(1) must comply with that direction promptly.

5.9.4A Notification of disconnection

If the *AER* applies to a court for a direction, under section 62 or 63 of the *National Electricity Law* or pursuant to regulations made under section 44AAG of the Trade Practices Act 1974 (Cth), that a *Registered Participant's market loads* be *disconnected*, the *AER* must promptly notify *NEMMCO* and the *participating jurisdictions* which the *AER* considers may be affected.

5.9.5 Disconnection during an emergency

(a) Where *NEMMCO* may direct a *Network Service Provider* to *disconnect* a *Registered Participant's facilities* during an emergency under the *Rules* or otherwise, then *NEMMCO* may:

(1) require the relevant *Registered Participant* to reduce the *power transfer* at the proposed point of *disconnection* to zero in an orderly manner and then direct a *Network Service Provider* to *disconnect* the *Registered Participant's facility* by automatic or manual means; or

(2) direct a *Network Service Provider* to immediately *disconnect* the *Registered Participant's facilities* by automatic or manual means where, in *NEMMCO's* reasonable opinion, it is not appropriate to follow the procedure set out in clause 5.9.5(a)(1) because action is

urgently required as a result of a threat to safety of persons, hazard to equipment or a threat to *power system security*.

(b) A *Network Service Provider* that has received a direction from *NEMMCO* under this clause 5.9.5 must comply with that direction promptly.

5.9.6 Obligation to reconnect

(a) Either *NEMMCO* (by directing the *Network Service Provider*) or the relevant *Network Service Provider* (either on its own initiative or in accordance with a direction from *NEMMCO*) must reconnect a *Registered Participant's facilities* to a *transmission network* or *distribution network* at a reasonable cost to the *Registered Participant* as soon as practicable if:

(1) *NEMMCO* is reasonably satisfied that there no longer exists an emergency due to which the *Registered Participant's facilities* were *disconnected* under clause 5.9.5;

(2) *NEMMCO* is reasonably satisfied that there no longer exists a reason for the *disconnection* under the *National Electricity Law* or the *Registered Participant's connection agreement*;

(3) one of the following occurs:

(i) a breach of the *Rules* giving rise to the *disconnection* has been remedied;

(ii) where the breach is not capable of remedy, compensation has been agreed and paid by the *Registered Participant* to the affected parties or, failing agreement, the amount of compensation payable has been determined in accordance with the dispute resolution procedure in rule 8.2 and that amount has been paid;

(iii) where the breach is not capable of remedy and the amount of compensation has not been agreed or determined, assurances for the payment of reasonable compensation have been given to the satisfaction of *NEMMCO*, the *Network Service Provider* and the parties affected; or

(iv) the *Registered Participant* has taken all necessary steps to prevent the re-occurrence of the breach and has delivered binding undertakings to *NEMMCO* or the *Network Service Provider* that the breach will not re-occur.

(b) In carrying out its obligations under clause 5.9.6(a), *NEMMCO* must, to the extent practicable, arrange for the implementation of an equitable sharing of the reconnection of *facilities* across *interconnected regions* up to the *power*

transfer capability of the *network* and, in performing these obligations within a *region*, both *NEMMCO* and the relevant *Network Service Provider* must, to the extent practicable, give priority to reconnection of a *region's sensitive loads.*

(c) A *Network Service Provider* that has received a direction from *NEMMCO* under this clause 5.9.6 must comply with that direction promptly.

Schedule 5.1a - System standards

S5.1a.1 Purpose

The purpose of this schedule is to establish *system standards* that:

(a) are necessary or desirable for the safe and reliable operation of the *facilities* of *Registered Participants*;

(b) are necessary or desirable for the safe and reliable operation of equipment;

(c) could be reasonably considered *good electricity industry practice*; and

(d) seek to avoid the imposition of undue costs on the industry or *Registered Participants*.

A *Registered Participant* should not, by virtue of this schedule, rely on *system standards* being fully complied with at a *connection point* under all circumstances. However, a *Registered Participant* should expect to be reasonably informed of circumstances where the standard of *supply* at its *connection points* will not conform to the *system standards*.

Except for standards of *frequency* and system stability, a *Registered Participant* should have the opportunity to negotiate or renegotiate relevant terms of a *connection agreement* (including relevant charges), to improve the standard of *supply* to the level of the *system standard*.

The *system standards* are set out below.

S5.1a.2 Frequency

The *frequency operating standards* are *system standards* and are as determined by the *Reliability Panel* and *published* by the *AEMC*.

S5.1a.3 System stability

The *power system* should remain in synchronism and be stable:

(a) **Transient stability:** following any *credible contingency event*; and

(b) **Oscillatory stability:** in the absence of any *contingency event*, for any level of *inter-regional* or *intra-regional* power transfer up to the applicable operational limit; and

(c) **Voltage stability:** stable *voltage* control must be maintained following the most severe *credible contingency event*.

For the purposes of clause S5.1a.3 a *credible contingency event* includes the application of a fault (other than a three-phase fault) to any part of the *power system* and de-energisation of the faulted element within the allowable clearance time applicable to that element according to clause S5.1a.8.

The halving time of any *inter-regional* or *intra-regional* oscillation, being the time for the amplitude of an oscillation to reduce by half, should be less than 10 seconds. To allow for planning and operational uncertainties, the *power system* should be planned and operated to achieve a halving time of 5 seconds.

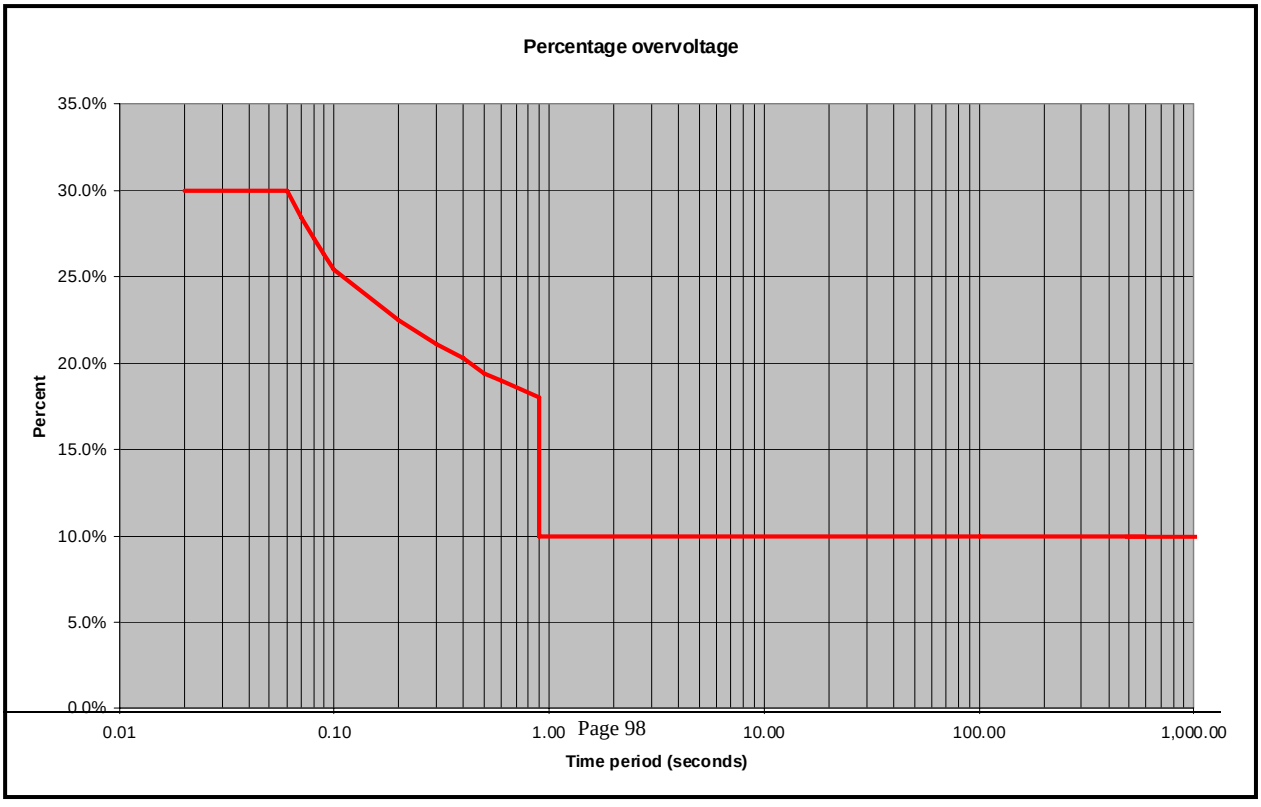
S5.1a.4 Power frequency voltage

Except as a consequence of a *contingency event*, the *voltage* of *supply* at a *connection point* should not vary by more than 10 percent above or below its *normal voltage*, provided that the *reactive power* flow and the *power factor* at the *connection point* is within the corresponding limits set out in the *connection agreement*.

As a consequence of a *credible contingency event*, the *voltage* of *supply* at a *connection point* should not rise above its *normal voltage* by more than a given percentage of *normal voltage* for longer than the corresponding period shown in Figure S5.1a.1 for that percentage.

As a consequence of a *contingency event*, the *voltage* of *supply* at a *connection point* could fall to zero for any period.

Figure S5.1a.1



S5.1a.5 Voltage fluctuations

The *voltage* fluctuation level of *supply* should be less than the "compatibility levels" set out in 1 of *Australian Standard* AS/NZS 61000.3.7:2001. To facilitate the application of this standard *Network Service Providers* must establish "planning levels" for their *networks* as provided for in the *Australian Standard.*

The following principles apply to the use of the shared network:

(a) the sharing between *Network Users* of the capability of *connection assets* to withstand *voltage* fluctuations is to be managed by *Network Service Providers* in accordance with the provisions of clause S5.1.5 of schedule 5.1; and

(b) to the extent practicable, the costs of managing or abating the impact of *voltage* fluctuations in excess of the costs which would result from the application of an *automatic access standard* are to be borne by those *Network Users* whose *facilities* cause the *voltage* fluctuations.

S5.1a.6 Voltage waveform distortion

Harmonic *voltage* distortion level of *supply* should be less than the "compatibility levels" defined in Table 1 of *Australian Standard* AS/NZS 61000.3.6:2001. To facilitate the application of this standard *Network Service Providers* must establish "planning levels" for their *networks* as provided for in the *Australian Standard.*

The following principles apply to the use of the shared network:

(a) the sharing between *Network Users* of the capability of *connection assets* to absorb or mitigate harmonic *voltage* distortion is to be managed by *Network Service Providers* in accordance with the provisions of clause S5.1.6 of schedule 5.1; and

(b) to the extent practicable, the costs of managing or abating the impact of harmonic distortion in excess of the costs which would result from the application of an *automatic access standard* are to be borne by those *Network Users* whose *facilities* cause the harmonic *voltage* distortion.

S5.1a.7 Voltage unbalance

Except as a consequence of a *contingency event*, the average *voltage* unbalance, measured at a *connection point*, should not vary by more than the amount set out in column 2 of Table S5.1a.1, when determined over a 30-minute averaging period.

As a consequence of a *credible contingency event*, the average *voltage* unbalance, measured at a *connection point*, should not vary by more than the amount set out

in column 3 of Table S5.1a.1, when determined over a 30-minute averaging period.

The average *voltage* unbalance, measured at a *connection point*, should not vary by more than the amount set out in column 4 of Table S5.1a.1 for the relevant nominal *supply voltage*, when determined over a 10-minute averaging period.

The average *voltage* unbalance, measured at a *connection point*, should not vary more often than once per hour by more than the amount set out in column 5 of Table S5.1a.1 for the relevant nominal *supply voltage*, when determined over a 1-minute averaging period.

For the purpose of this clause, *voltage* unbalance is measured as negative sequence voltage.

Table S5.1a.1

Nominal supply voltage (kV)	**Maximum negative sequence voltage (% of nominal voltage)**			
Column 1	**Column 2**	**Column 3**	**Column 4**	**Column 5**
	no contingency event	**credible contingency event**	**general**	**once per hour**
	30 minute average	**30 minute average**	**10 minute average**	**1 minute average**
more than 100	0.5	0.7	1.0	2.0
more than 10 but not more than 100	1.3	1.3	2.0	2.5
10 or less	2.0	2.0	2.5	3.0

S5.1a.8 Fault clearance times

(a) Faults anywhere within the *power system* should be cleared sufficiently rapidly that:

(1) the *power system* does not become unstable as a result of faults that are *credible contingency events*;

(2) *inter-regional* or *intra-regional power transfers* are not unduly *constrained*; and

(3) consequential equipment damage is minimised.

(b) The *fault clearance time* of a primary *protection system* for a *short circuit fault* of any *fault type* anywhere:

(1) within a *substation*;

(2) within *connected plant*; or

(3) on at least the half of a power line nearer to the *protection system*,

should not exceed the relevant time in column 2 of Table S5.1a.2 for the nominal *voltage* that applies at the fault location.

(c) The *fault clearance time* of a primary *protection system* for a *short circuit fault* of any *fault type* anywhere on the remote portion of a power line for which the near portion is protected by a primary *protection system* under clause S5.1a8(b) should not exceed the relevant time in column 3 of Table S5.1a.2 for the nominal *voltage* that applies at the fault location.

(d) The *fault clearance time* of a *breaker fail protection system* or similar back-up *protection system* for a *short circuit fault* of any *fault type* should not exceed the relevant time in column 4 of Table S5.1a.2 for the nominal *voltage* that applies at the fault location.

(e) The owner of the faulted element may require shorter *fault clearance times* to minimise *plant* damage.

(f) The allowable *fault clearance times* specified in Table S5.1a.2 apply in accordance with the provisions of clause S5.1.9 to *facilities* constructed or modified on or after the *performance standards commencement date.*

(g) For *facilities* other than those referred to in clause S5.1a.8(f), the applicable allowable *fault clearance times* must be derived by the relevant *Network Service Provider* from the existing capability of each *facility* on the *performance standards commencement date*.

Table S5.1a.2

Nominal voltage at fault location(kV)	**Time(milliseconds)**		
Column 1	**Column 2**	**Column 3**	**Column 4**
400kV and above	80	100	175
at least 250kV but less than 400kV	100	120	250
more than 100kV but less than 250kV	120	220	430

Nominal voltage at fault location(kV)	**Time(milliseconds)**		
Column 1	**Column 2**	**Column 3**	**Column 4**
less than or equal 100 kV	As necessary to prevent *plant* damage and meet stability requirements		

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.

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 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*.

S5.1.2 Network reliability

S5.1.2.1 Credible contingency events

Network Service Providers must plan, design, maintain and operate their *transmission networks* and *distribution networks* to allow the transfer of power from *generating units* to *Customers* with all *facilities* or equipment associated with the *power system* in service and may be required by a *Registered Participant* under a *connection agreement* to continue to allow the transfer of power with certain facilities or *plant* associated with the *power system* out of service, whether or not accompanied by the occurrence of certain faults (called "*credible contingency events*").

The following *credible contingency events* and practices must be used by *Network Service Providers* for planning and operation of *transmission networks* and *distribution networks* unless otherwise agreed by each *Registered Participant* who would be affected by the selection of *credible contingency events*:

(a) The *credible contingency events* must include the *disconnection* of any single *generating unit* or *transmission line*, with or without the application of a single circuit two-phase-to-ground solid fault on lines operating at or above 220 kV, and a single circuit three-phase solid fault on lines operating below 220 kV. The *Network Service Provider* must assume that the fault will be cleared in primary protection time by the faster of the duplicate protections with installed intertrips available. For existing *transmission lines* operating below 220 kV but above 66 kV a two-phase to earth fault criterion may be used if the modes of operation are such as to minimise the probability of three-phase faults occurring and operational experience shows this to be adequate, and provided that the *Network Service Provider* upgrades performance when the opportunity arises.

(b) For lines at any *voltage* above 66 kV which are not protected by an overhead earth wire and/or lines with tower footing resistances in excess of 10 ohms, the *Network Service Provider* may extend the criterion to include a single circuit three-phase solid fault to cover the increased risk of such a fault occurring. Such lines must be examined individually on their merits by the relevant *Network Service Provider*.

(c) For lines at any *voltage* above 66 kV a *Network Service Provider* must adopt operational practices to minimise the risk of slow fault clearance in

case of inadvertent closing on to earths applied to equipment for maintenance purposes. These practices must include but not be limited to:

(1) Not leaving lines equipped with intertrips alive from one end during maintenance; and

(2) *Off-loading* a three terminal (tee connected) line prior to restoration, to ensure switch on to fault *facilities* are operative.

(d) The *Network Service Provider* must ensure that all *protection systems* for lines at a *voltage* above 66 kV, including associated intertripping, are well maintained so as to be available at all times other than for short periods (not greater than eight hours) while the maintenance of a *protection system* is being carried out.

S5.1.2.2 Network service within a region

The following paragraphs of this section set out minimum standards for certain *network services* to be provided to *Registered Participants* by *Network Service Providers* within a *region*. The amount of *network* redundancy provided must be determined by the process set out in clause 5.6.2 of the *Rules* and is expected to reflect the grouping of *generating units*, their expected capacity factors and availability and the size and importance of *Customer* groups.

The standard of service to be provided at each *connection point* must be included in the relevant *connection agreement*, and must include a *power transfer capability* such as that which follows:

(a) In the *satisfactory operating state*, the *power system* must be capable of providing the highest reasonably expected requirement for *power transfer* (with appropriate recognition of diversity between individual peak requirements and the necessity to withstand *credible contingency events*) at any time.

(b) During the most critical single element *outage* the *power transfer* available through the *power system* may be:

(1) zero (single element *supply*);

(2) the defined capacity of a backup *supply*, which, in some cases, may be provided by another *Network Service Provider*;

(3) a nominated proportion of the normal *power transfer capability* (eg 70 percent); or

(4) the normal *power transfer capability* of the *power system* (when required by a *Registered Participant*).

In the case of clauses S5.1.2.2(b)(2) and (3) the available capacity would be exceeded sufficiently infrequently to allow maintenance to be carried out on each *network* element by the *Network Service Provider*. A *connection agreement* may state the expected proportion of time that the normal capability will not be available, and the capability at those times, taking account of specific design, locational and seasonal influences which may affect performance, and the random nature of element *outages*.

A *connection agreement* may also state a conditional *power transfer capability* that allows for both circuits of a double circuit line or two closely parallel circuits to be out of service.

S5.1.2.3 Network service between regions

The *power transfer capability* between *regions* must be determined by the process set out in clauses 5.6.5 and 5.6.6 of the *Rules*.

The following paragraphs of this section set out a framework within which *Network Service Providers* must describe to *NEMMCO* the levels of *network service* that apply for *power transfer* between *regions*. In cases where *power transfer capability* is determined by stability considerations on the *power system* (refer to clause S5.1.8 of this schedule) it is expected that line *outages* within *transmission networks* within a region will weaken the *network* so as to result in reduced *power transfer capability* even in the absence of *outages* of the lines between *regions*.

(a) In the *satisfactory operating state* the *power transfer capability* between *regions* is defined by a multi-term equation for each *connection* between *regions* which takes account of all *power system* operating conditions which can significantly impact on performance. The majority of these operating conditions are the result of *market* operation and are outside the control of the *Network Service Provider*. In the *satisfactory operating state* the *network* must be planned by the *Network Service Provider* and operated by *NEMMCO* to withstand the impact of any *single contingency* with severity less than the *credible contingency events* stated in clause S5.1.2.1.

(b) During critical single element *outages* reduced *power transfer capabilities* will apply. In those cases where *outage* of the remaining element will result in breaking of the *connection* between the *regions NEMMCO* must provide for the effect on *power system frequency* in the separate *transmission systems* following this event when determining the maximum *power transfer*.

S5.1.3 Frequency variations

A *Network Service Provider* must ensure that within the *extreme frequency excursion tolerance limits* all of its *power system* equipment will remain in service unless that equipment is required to be switched to give effect to *load shedding* in

accordance with clause S5.1.10, or is required by *NEMMCO* to be switched for operational purposes.

Sustained operation outside the *extreme frequency excursion tolerance limits* need not be taken into account by *Network Service Providers* in the design of *plant* which may be *disconnected* if this is necessary for the protection of that *plant*.

S5.1.4 Magnitude of power frequency voltage

A *Transmission Network Service Provider* must plan and design its *transmission system* and equipment for control of *voltage* such that the minimum steady state *voltage* magnitude, the maximum steady state *voltage* magnitude and variations in *voltage* magnitude are consistent with the levels stipulated in clause S5.1a.4 of the *system standards*.

(a) The *Network Service Provider* must determine the *automatic access standard* for the *voltage* of *supply* at the *connection point* such that the *voltage* may vary in accordance with clause S5.1a.4 of the *system standards*.

(b) The *Network Service Provider* must determine the *minimum access standard* for the *voltage of supply* at the *connection point* such that the *voltage* may vary:

(1) as a consequence of a *credible contingency event* in accordance with clause S5.1a.4; and

(2) otherwise, between 95 percent and 105 percent of the target *voltage*.

(c) For the purposes of clause S5.1.4(b) the target *voltage* must be determined as follows:

(1) if the *connection point* is connected to a *transmission line* (but not through a *transformer*), the *Network Service Provider* must determine the target *voltage* in consultation with *NEMMCO* taking into account the capability of existing *facilities* that are subject to that *supply voltage*; and

(2) otherwise, *Network Users* that share the same *supply voltage* must jointly determine the target *voltage* which may be specified to vary with aggregate *loading level*;

provided that at all times the *supply voltage* remains between 90 percent and 110 percent of the normal voltage determined in accordance with clause S5.1a.4 except as a consequence of a *contingency event.*

(d) For the purposes of this clause, the *voltage* of *supply* is measured as the *RMS phase voltage.*

Where the independent control of *voltage* at the *connection point* is possible without adverse impact on *voltage* control at another *connection point*, the *Network Service Provider* must make reasonable endeavors to meet the request. The target *voltage* and any agreement to a target range of *voltage* magnitude must be specified in the relevant *connection agreement*. The agreement may include a different target range in the *satisfactory operating state* and after a *credible contingency event* (and how these target ranges may be required to vary with *loading*).

A *Network Service Provider* must ensure that each *facility* that is part of its *transmission network* or *distribution network* is capable of continuous uninterrupted operation in the event that variations in *voltage* magnitude occur due to faults external to the *facility*. The design of a *facility* should anticipate the likely time duration and magnitude of variations in the power-*frequency* phase *voltages* which may arise dependent on the nature and location of the fault.

S5.1.5 Voltage fluctuations

A *Network Service Provider* must use reasonable endeavours to design and operate its *transmission system* or *distribution system* and include conditions in *connection agreements* in relation to the permissible variation with time of the power *generated* or *load* taken by a *Network User* to ensure that other *Network Users* are supplied with a power-*frequency voltage* which fluctuates to an extent that is less than the levels stipulated in accordance with the provisions of clause S5.1a.5 of the *system standards* and this clause S5.1.5.

In accordance with AS/NZS 61000.3.7:2001 and guidelines published by *Standards Australia* and applying the assumption that *Customers* will comply with their obligations under schedule 5.3, a *Network Service Provider* must determine "Planning Levels" for *connection points* on their *network* in order to maintain *voltage* fluctuation levels for all supply points to customers supplied from their *network* below the "Compatibility Levels" defined in Table 1 of AS/NZS 61000.3.7:2001.

The *Network Service Provider* must allocate emission limits in response to a *connection* enquiry or an *application to connect* and evaluate the acceptability for *connection* of fluctuating sources as follows:

(a) *Automatic access standard:* the *Network Service Provider* must allocate emission limits no more onerous than the lesser of the acceptance levels determined in accordance with either of the stage 1 or the stage 2 evaluation procedures defined in AS/NZS 61000.3.7:2001.

(b) *Minimum access standard:* subject to clause S5.1.5(c), the determination by the *Network Service Provider* of acceptable emission limits must be undertaken in consultation with the party seeking *connection* using the stage 3 evaluation procedure defined in AS/NZS61000.3.7:2001.

(c) In respect of each new *connection* at a level of performance below the *automatic access standard* the *Network Service Provider* must include provisions in the relevant *connection agreement* requiring the *Network User* if necessary to meet the *system standards* or allow connection of other *Network Users* to either upgrade to the *automatic access standard* or fund the reasonable cost of the works necessary to mitigate their effect of connecting at a standard below the *automatic access standard*.

(d) If for existing customer *connections* the level of *voltage* fluctuation is, or may be, exceeded as a result of a proposed new *connection*, the *Network Service Provider* must, if the cause of that excessive level cannot be remedied by enforcing the provisions of existing *connection agreements*, undertake all reasonable works necessary to meet the technical standards in this schedule or to permit the proposed new *connection* within the requirements stated in this clause.

For other than a new *connection* in accordance with the preceding paragraph, the responsibility of a *Network Service Provider* for excursions in *voltage* fluctuations above the levels defined above is limited to *voltage* fluctuations caused by *network plant* and the pursuit of all reasonable measures available under the *Rules* and its *connection agreements*.

S5.1.6 Voltage harmonic or voltage notching distortion

A *Network Service Provider* must use reasonable endeavours to design and operate its *network* and include conditions in *connection agreements* to ensure that the effective harmonic *voltage* distortion at any point in the *network* will be limited to less than the levels stipulated in accordance with the provisions of clause S5.1a.6 of the *system standards* and this clause S5.1.6.

In accordance with AS/NZS 61000.3.6:2001 and guidelines published by *Standards Australia* and applying the assumption that *Customers* will comply with their obligations under schedule 5.3 *Network Service Providers* must determine "Planning Levels" for *connection points* on their *network* in order to maintain harmonic *voltage* distortion for all supply points to customers supplied from their *network* below the "Compatibility Levels" defined in Table 1 of AS/NZS 61000.3.6:2001.

The *Network Service Provider* must allocate emission limits to a connection enquiry or an *application to connect* and must evaluate the acceptability for *connection* of distorting sources as follows:

(a) *Automatic access standard*: the *Network Service Provider* must allocate emission limits no more onerous than the lesser of the acceptance levels determined in accordance with either of the stage 1 or the stage 2 evaluation procedures defined in AS/NZS 61000.3.6:2001.

(b) *Minimum access standard*: subject to clause S5.1.6(c), the determination by the *Network Service Provider* of acceptable emission limits must be undertaken in consultation with the party seeking *connection* using the Stage 3 evaluation procedure defined in AS/NZS61000.3.6:2001.

(c) In respect of each new *connection* at a level of performance below the *automatic access standard* the *Network Service Provider* must include provisions in the relevant *connection agreement* requiring the *Network User* if necessary to meet the *system standards* or allow connection of other *Network Users* to either upgrade to the *automatic access standard* or fund the reasonable cost of the works necessary to mitigate their effect of connecting at a standard below the *automatic access standard*.

(d) If for existing customer *connections* the level of harmonic *voltage* distortion is, or may be, exceeded as a result of a proposed new *connection*, the *Network Service Provider* must, if the cause of that excessive level cannot be remedied by enforcing the provisions of existing *connection agreements*, undertake all works necessary to meet the technical standards in this schedule or to permit a proposed new *connection* within the *automatic access standard* defined in clause S5.3.8 and the requirements stated in this clause.

For other than a new *connection* in accordance with the preceding paragraph, the responsibility of a *Network Service Provider* for harmonic *voltage* distortion outside the range defined above is limited to harmonic *voltage* distortion caused by *network plant* and the pursuit of all measures available under the *Rules* and its *connection agreements*.

S5.1.7 Voltage unbalance

(a) A *Transmission Network Service Provider* must balance the effective impedance of the phases of its *network*, and a *Distribution Network Service Provider* must balance the current drawn in each phase at each of its *connection points*, so as to achieve average levels of negative sequence *voltage* at all *connection point*s that are equal to or less than the values set out in Table S5.1a.1 as determined in accordance with the accompanying provisions of clause S5.1a.7 of the *system standards.*

(b) A *Network Service Provider* must include conditions in *connection agreements* to ensure that a *Connection Applicant* will balance the current drawn in each phase at each of its *connection points* so as to achieve:

(1) for those *Network Users* listed in clause S5.3(a): the levels permitted in accordance with clause S5.3.6 of schedule 5.3;

(2) for *Market Network Service Providers*: the levels permitted in accordance with clause S5.3a.9 of schedule 5.3a;

(3) otherwise: the average levels of negative sequence *voltage* at each of its *connection points* that are equal to or less than the values set out in Table S5.1a.1 and the accompanying provisions of clause S5.1a.7 of the *system standards.*

The responsibility of the *Network Service Provider* for *voltage* unbalance outside the ranges defined above is limited to *voltage* unbalance caused by the *network* and the pursuit of all measures available under the *Rules* and its *connection agreements.*

(c) A *Network Service Provider* must include conditions in *connection agreements* to ensure that each *Generator* will balance:

(1) the *voltage generated* in each phase of its *generating system*; and

(2) when not generating, the current drawn in each phase,

in order to achieve average levels of negative sequence *voltage* at each of the *generating system connection points* due to phase imbalances within the *generating plant* that are not more than the values determined by the *Network Service Provider* to achieve average levels of negative sequence *voltage* at the *connection points* of other *Network Users* in accordance with clause S5.1a.7.

(d) When including conditions under paragraph (c), the *Network Service Provider* must have regard to the capabilities of the relevant *generating plant* technology.

S5.1.8 Stability

In conforming with the requirements of the *system standards*, the following criteria must be used by *Network Service Providers* for both planning and operation:

For stable operation of the *national grid*, both in a *satisfactory operating state* and following any *credible contingency events* described in clause S5.1.2.1:

(a) the *power system* will remain in synchronism;

(b) damping of *power system* oscillations will be adequate; and

(c) *voltage* stability criteria will be satisfied.

Damping of *power system* oscillations must be assessed for planning purposes according to the design criteria which states that *power system damping* is considered adequate if after the most critical *credible contingency event*, simulations calibrated against past performance indicate that the halving time of the least damped electromechanical mode of oscillation is not more than five seconds.

To assess the damping of *power system* oscillations during operation, or when analysing results of tests such as those carried out under clause 5.7.7 of the *Rules*, the *Network Service Provider* must take into account statistical effects. Therefore, the *power system damping* operational performance criterion is that at a given operating point, real-time monitoring or available test results show that there is less than a 10 percent probability that the halving time of the least damped mode of oscillation will exceed ten seconds, and that the average halving time of the least damped mode of oscillation is not more than five seconds.

The *voltage* control criterion is that stable *voltage* control must be maintained following the most severe *credible contingency event*. This requires that an adequate *reactive power* margin must be maintained at every *connection point* in a *network* with respect to the *voltage* stability limit as determined from the *voltage*/reactive *load* characteristic at that *connection point*. Selection of the appropriate margin at each *connection point* is at the discretion of the relevant *Network Service Provider*, subject only to the requirement that the margin (expressed as a capacitive *reactive power* (in MVAr)) must not be less than one percent of the maximum fault level (in MVA) at the *connection point*.

In planning a *network* a *Network Service Provider* must consider *non-credible contingency events* such as *busbar* faults which result in tripping of several circuits, uncleared faults, double circuit faults and multiple contingencies which could potentially endanger the stability of the *power system*. In those cases where the consequences to any *network* or to any *Registered Participant* of such events are likely to be severe disruption a *Network Service Provider* and/or a *Registered Participant* must install emergency controls within the *Network Service Provider's* or *Registered Participant's* system or in both, as necessary, to minimise disruption to any *transmission* or *distribution network* and to significantly reduce the probability of cascading failure.

A *Registered Participant* must co-operate with a *Network Service Provider* to achieve stable operation of the *national grid* and must use all reasonable endeavours to negotiate with the *Network Service Provider* regarding the installation of emergency controls as described in the previous paragraph. The cost of installation, maintenance and operation of the emergency controls must be borne by the *Network Service Provider* who is entitled to include this cost when calculating the *Transmission Customer use of system* price.

S5.1.9 Protection systems and fault clearance times

Network Users

(a) A *Network Service Provider* must determine the *automatic access standard* and *minimum access standard* that applies to the protection zone of each *protection system* in relation to the *connection point* and the *plant* to be *connected*, as follows:

(1) The *automatic access standard* for *fault clearance time* for any *fault type* is the lesser of the *system standard* set out in clause S5.1a.8 that applies to the highest nominal *voltage* within the *protection system's* protection zone and the corresponding *minimum access standard* determined under clause S5.1.9(a)(2) or clause S5.1.9(a)(3) as applicable.

(2) The *minimum access standard* for *fault clearance time* of a primary *protection system* is:

(i) for a *fault type* that constitutes a *credible contingency event* in the relevant protection zone, the longest time such that a *short circuit fault* of that *fault type* that is cleared in that time would not cause the *power system* to become unstable when operating at any level of *inter-regional* or *intra-regional power transfer* that would be permissible (taking into account all other limiting criteria) if the *fault clearance time* for such a *fault* at the *connection point* were the *system standard* set out in clause S5.1a.8 that applies to the nominal *voltage* at the *connection point*; and

(ii) for a *fault type* that does not constitute a *credible contingency event* in the relevant protection zone:

(A) if a two phase to ground fault in that protection zone constitutes a *credible contingency event*, the corresponding *fault clearance time* for a two phase to ground *short circuit fault* in that protection zone as determined under clause S5.1.9(a)(2)(i); and

(B) otherwise, the shortest of the *fault clearance times* for a two phase to ground *short circuit fault* in each adjoining protection zone (excluding *transformer* protection zones and dead zones) as determined under clause S5.1.9(a)(2)(i) or clause S5.1.9(e).

(3) The *minimum access standard* for *fault clearance time* of a *breaker fail protection system* or similar back-up *protection system* is the longest time such that a *short circuit fault* of any *fault type* that is cleared in that time would not damage any part of the *power system* (other than the faulted element) while the fault current is flowing or being interrupted.

(b) The negotiation of access standards in relation to paragraph (a) must involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*.

Transmission systems and distribution systems

(c) Subject to clauses S5.1.9(k) and S5.1.9(l), a *Network Service Provider* must provide sufficient primary *protection systems* and back-up *protection systems* (including *breaker fail protection systems*) to ensure that a fault of any *fault type* anywhere on its *transmission system* or *distribution system* is automatically *disconnected* in accordance with clause S5.1.9(e) or clause S5.1.9(f).

(d) If the *fault clearance time* determined under clause S5.1.9(e) of a primary *protection system* for a two phase to ground *short circuit fault* is less than 10 seconds, the primary *protection system* must have sufficient redundancy to ensure that it can clear *short circuit faults* of any *fault type* within the relevant *fault clearance time* with any single protection element (including any communications facility upon which the *protection system* depends) out of service.

(e) The *fault clearance time* of a primary *protection system* of a *Network Service Provider* must not exceed:

(1) for any *fault type* that constitutes a *credible contingency event* in the relevant protection zone, the longest time such that a *short circuit fault* of that *fault type* that is cleared in that time would not cause the *power system* to become unstable when operating at any level of *inter-regional* or *intra-regional power transfer* that would be permissible (taking into account all other limiting criteria) if the *fault clearance time* for such a fault in that protection zone were the relevant *system standard* set out in clause S5.1a.8; and

(2) for any *fault type* that does not constitute a *credible contingency event* in the relevant protection zone:

(i) if a two phase to ground fault in that protection zone is a *credible contingency event*, the corresponding *fault clearance time* for a two phase to ground fault in that protection zone as determined under clause S5.1.9(e)(1); and

(ii) otherwise, the shortest of the *fault clearance times* for a two phase to ground fault in each adjoining protection zone (excluding *transformer* protection zones and dead zones) as determined under clauses S5.1.9(a)(2)(i), S5.1.9(e)(1)or S5.1.9(e)(2)(i).

(f) The *fault clearance time* of each *breaker fail protection system* or similar back-up *protection system* of a *Network Service Provider* must be such that a *short circuit fault* of any *fault type* that is cleared in that time would not damage any part of the *power system* (other than the faulted element) while the fault current is flowing or being interrupted.

(g) A *Network Service Provider* must demonstrate to *NEMMCO* that each *fault clearance time* for a primary *protection system* that is longer than the relevant *system standard* set out in clause S5.1a.8 and is less than 10 seconds would not cause or require an *inter-regional* or *intra-regional power transfer capability* to be reduced.

(h) A *Network Service Provider* must include in each *connection agreement* entered into after the *performance standards commencement date*:

(1) the *fault clearance times* for each *fault type* of each of its *protection systems* that could reasonably be expected to interrupt *supply* to or from the relevant *connection point*; and

(2) an agreement to not increase those *fault clearance times* without the prior written agreement of the other party.

(i) *Network Service Providers* must coordinate and cooperate with *Network Users* to implement *breaker fail* protection for circuit breakers provided to isolate the *Network User's facility* from the *Network Service Provider's facilities*.

(j) Where practicable and economic to achieve, new network investment should meet the *system standard* for *fault clearance times* as specified in clause S5.1a.8 for two phase to ground *short circuit faults*.

(k) A primary *protection system* may clear faults other than *short circuit faults* slower than the relevant *fault clearance time*, provided that such faults would be cleared sufficiently promptly to not adversely impact on *power system security* compared with its operation for the corresponding *short circuit fault*. In the case of a fault within equipment at a station, the corresponding *short circuit fault* is to be taken as a two phase to ground *short circuit fault* at the external connections of the equipment.

(l) *Protection systems* may rely on *breaker fail protection systems* or other back-up *protection systems* to completely clear faults of any *fault type* that:

(1) occur within a *substation* between a protection zone and a circuit breaker adjacent to that protection zone that is required to open to clear the fault (a "dead zone"); and

(2) remain connected through a power line or *transformer* after operation of a primary *protection system*,

provided that the relevant *Network Service Provider* assesses that the likelihood of a fault occurring within the dead zone is not greater than the likelihood of a fault occurring on *busbars*.

(m) For the purposes of this clause S5.1.9, a *credible contingency event* includes any event that clause S5.1.2.1 requires a *Network Service Provider* to consider as a *credible contingency event*.

(n) The provisions of clause S5.1.9(d) apply to *facilities* constructed or modified on or after the *performance standards commencement date*.

(o) For *facilities* other than those referred to in clause S5.1.9(n), the requirement for primary *protection system* redundancy must be derived by the *Network Service Provider* from the existing capability of each *facility* on the *performance standards commencement date*.

S5.1.10 Load and network control facilities

S5.1.10.1 General

Each *Network Service Provider* in consultation with *NEMMCO* must ensure that:

(a) sufficient *load* is under the control of underfrequency relays where required to ensure that in the event of the sudden, unplanned simultaneous occurrence of multiple *contingency events*, the *power system frequency* does not move outside the *extreme frequency excursion tolerance limits*;

(b) where determined to be necessary, sufficient *load* is under the control of undervoltage relays to minimize or reduce the risk of voltage collapse on the occurrence of multiple *contingency events*; and

(c) there is sufficient *load* under manual or automatic control either locally or from remotely located *control centres* to allow the *load shedding procedures* to be implemented on instruction from *NEMMCO* to enable *NEMMCO* to maintain *power system security*.

A *Network Service Provider* may require *load shedding* arrangements to be installed to cater for abnormal operating conditions.

Arrangements for *load shedding* must be agreed between *Transmission Network Service Providers* and *connected Distribution Network Service Providers* and may include the opening of circuits in either a *transmission* or *distribution network*.

The *Transmission Network Service Provider* must specify, in the *connection agreement*, control and monitoring requirements to be provided by a *Distribution Network Service Provider* for *load shedding facilities*.

S5.1.10.2 Distribution Network Service Providers

A *Distribution Network Service Provider* must:

(a) provide, install, operate and maintain *facilities* for *load shedding* in respect of any *connection point* at which the maximum *load* exceeds 10MW in accordance with clause 4.3.5 of the *Rules*;

(b) in accordance with the provisions of the relevant *connection agreement*, co-operate with the *Transmission Network Service Provider*s in conducting periodic functional testing of the *facilities*, which must not require *load* to be *disconnected*;

(c) apply underfrequency settings to relays as determined by *NEMMCO* in consultation with the *Network Service Provider*; and

(d) apply undervoltage settings to relays as notified by the *Transmission Network Service Provider* in accordance with clause S5.1.10.3(b).

S5.1.10.3 Transmission Network Service Providers

Transmission Network Service Providers must:

(a) conduct periodic functional tests of the *load shedding facilities*; and

(b) notify *Distribution Network Service Providers* regarding the settings of undervoltage *load* shed relays as determined by *NEMMCO* in consultation with the *Transmission Network Service Provider*.

S5.1.11 Automatic reclosure of transmission or distribution lines

Where *automatic reclose equipment* is provided on *transmission lines* or *distribution lines*, check or blocking *facilities* must be applied to the *automatic reclose equipment* in those circumstances where there is any possibility of the two ends of the *transmission line* or *distribution line* being *energised* from sources that are not in synchronism.

S5.1.12 Rating of transmission lines and equipment

For operational purposes each *Network Service Provider* must, on reasonable request, advise *NEMMCO* of the maximum current that may be permitted to flow (under conditions nominated by *NEMMCO*) through each *transmission line*, *distribution line* or other item of equipment that forms part of its *transmission system* or *distribution system*.

This maximum current is called a "*current rating*" of the *transmission line*, *distribution line* or item of equipment notwithstanding that it may be determined by equipment associated with its *connection* to the *power system* (including switchgear, droppers, current *transformers* and *protection systems*).

NEMMCO may request for a *transmission line*, *distribution line* or other item of equipment:

(a) a continuous *current rating*, being the level of current that is permitted to flow in that item of equipment for an indefinite period; and

(b) one or more short term *current ratings* for a period of time nominated by *NEMMCO* after consultation with the *Network Service Provider*, being the level of current that is permitted to flow in that item of equipment for that period of time if the current had been less than the corresponding continuous *current rating* for a reasonable prior period taking into account the thermal properties of the item of equipment.

The *Network Service Provider* may be required by *NEMMCO* to advise different *current ratings* to be applied under nominated conditions including, without limitation:

(a) ambient weather conditions;

(b) seasons and/or times of *day*;

(c) ratios of the current during an emergency to the current prior to the emergency (taking into account pre-contingent loading history where applicable); and

(d) period of loading at the nominated level.

A *Transmission Network Service Provider* is entitled to advise *NEMMCO* of short term *current ratings* which may apply for nominated periods of time to the relevant *transmission line* or item of equipment provided that these ratings do not materially affect the safety of the *transmission line* or item of equipment, or the safety of persons. Short-term ratings for *transmission lines* or items of equipment may be implemented by a methodology or algorithm in a format agreed with *NEMMCO*.

S5.1.13 Information to be provided

A *Network Service Provider* must, in response to a *connection* enquiry or an *application to connect* made in accordance with clause 5.3.2 of the *Rules*, provide the *connection applicant* electrical design information relevant to the nominal point of *connection* in accordance with a relevant requirement of schedules 5.2, 5.3 or 5.3a.

Schedule 5.2 - Conditions for Connection of Generators

S5.2.1 Outline of requirements

(a) This schedule sets out details of additional requirements and conditions that *Generators* must satisfy as a condition of *connection* of a *generating system* to the *power system.*

(b) This schedule does not apply to any *generating system* that is:

(1) subject to an exemption from registration under clause 2.2.1(c); or

(2) eligible for exemption under any guidelines issued under clause 2.2.1(c),

and which is *connected* or intended for use in a manner the *Network Service Provider* considers is unlikely to cause a material degradation in the quality of *supply* to other *Network Users.*

(c) This schedule also sets out the requirements and conditions which subject to clause 5.2.5 of the *Rules*, are obligations on *Generators*:

(1) to co-operate with the relevant *Network Service Provider* on technical matters when making a new *connection*; and

(2) to provide information to the *Network Service Provider* or *NEMMCO.*

(d) The equipment associated with each *generating system* must be designed to withstand without damage the range of operating conditions which may arise consistent with the *system standards*.

(e) *Generators* must comply with the *performance standards* and any attached terms or conditions of agreement agreed with the *Network Service Provider* or *NEMMCO* in accordance with a relevant provision of schedules 5.1a or 5.1.

(f) This schedule does not set out arrangements by which a *Generator* may enter into an agreement or contract with *NEMMCO* to:

(1) provide additional services that are necessary to maintain *power system security*; or

(2) provide additional services to facilitate management of the *market.*

(g) This schedule provides for *automatic access standards* and the determination of *negotiated access standards* derived from *minimum access standards* which once determined, must be recorded together with the

automatic access standards in a *connection agreement* and registered with *NEMMCO* as *performance standards*.

S5.2.2 Application of Settings

A *Generator* must only apply settings to a *control system* or a *protection system* that are necessary to comply with performance requirements of this schedule 5.2 if the settings have been approved in writing by the relevant *Network Service Provider* and, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, also by *NEMMCO*. A *Generator* must not allow its *generating unit* to *supply* electricity to the *power system* without such prior approval.

If a *Generator* seeks approval from the *Network Service Provider* to apply or change a setting, approval must not be withheld unless the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines that the changed setting would cause the *generating unit* to not comply with the relevant *performance standard* or cause an *inter-regional* or *intra-regional power transfer capability* to be reduced.

If the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines that a setting of a *generating unit's control system* or *protection system* needs to change to comply with the relevant *performance standard* or to maintain or restore an *inter-regional* or *intra-regional power transfer capability*, the *Network Service Provider* or *NEMMCO* (as applicable) must consult with the relevant *Generator*, and the *Network Service Provider* may request in writing that a setting be applied in accordance with the determination.

The *Network Service Provider* may also request a test to verify the performance of the relevant *plant* with the new setting. The *Network Service Provider* must provide *NEMMCO* with a copy of its request to a *Generator* to apply a setting or to conduct a test.

A *Generator* who receives such a request must arrange for the notified setting to be applied as requested and for a test to be conducted as requested. After the test, the *Generator* must, on request, provide both *NEMMCO* and the *Network Service Provider* with a report of a requested test, including evidence of its success or failure. Such a report of a test is *confidential information*.

A *Generator* must not change a setting requested by the *Network Service Provider* without its prior written agreement. If the *Network Service Provider* requires a *Generator* to change a setting within 18 months of a previous request, the *Network Service Provider* must pay the *Generator* its reasonable costs of changing the setting and conducting the tests as requested.

S5.2.3 Technical matters to be coordinated

(a) A *Generator* and the relevant *Network Service Provider* must use all reasonable endeavours to agree upon relevant technical matters in respect of each new or altered *connection* of a *generating system* to a *network* including:

(1) design at the *connection point*;

(2) physical layout adjacent to the *connection point*;

(3) primary protection and backup protection (clause S5.2.5);

(4) control characteristics (clause S5.2.5);

(5) communications *facilities* (clause S5.2.6);

(6) insulation co-ordination and lightning protection (paragraph (b));

(7) fault levels and fault clearance (clause S5.2.8);

(8) switching and *isolation* facilities (clause S5.2.8*)*;

(9) interlocking and *synchronising* arrangements; and

(10) *metering installation*s.

(b) A *Generator* must ensure that in designing a *generating system's* electrical *plant*, including any *substation* for the *connection* of the *generating system* to the *network*, to operate at the same *nominal voltage* as at the *connection point*:

(1) the *plant* complies with the relevant *Australian Standards* unless a provision of these *Rules* allows or requires otherwise;

(2) the earthing of the *plant* complies with the ENA EG1-2006: Substation Earthing Guide to reduce step and touch potentials to safe levels;

(3) the *plant* is capable of withstanding, without damage the *voltage* impulse levels specified in the *connection agreement*;

(4) the insulation levels of the *plant* are co-ordinated with the insulation levels of the *network* to which the *generating system* is *connected* as specified in the *connection agreement*; and

(5) safety provisions in respect of the *plant* comply with requirements applicable to the *participating jurisdiction* in which the *generating system* is located, as notified by the *Network Service Provider*.

(c) If no relevant *Australian Standard* exists for the purposes of paragraph (b)(1), the *Generator* must agree with the *Network Service Provider* for the *Generator* to comply with another relevant standard.

S5.2.4 Provision of information

(a) A *Generator* or person who is negotiating a *connection agreement* with a *Network Service Provider* must promptly on request by *NEMMCO* or the *Network Service Provider* provide all data in relation to that *generating system* specified in schedule 5.5.

(b) A *Generator*, or person required under the *Rules* to register as the *Generator* in respect of a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more, by the earlier of:

(1) the day on which an *application to connect* is made under clause 5.3.4(a);

(2) the day on which amendments to *performance standards* are submitted under clause 5.3.9(b);

(3) three months before commissioning of a *generating system* or planned alteration to a *generating system*; or

(4) 5 *business days* before commissioning of a *generating system* alteration that is repairing *plant* after a *plant* failure, if *plant* performance after the alteration will differ from performance prior to the *plant* failure,

must provide:

(5) to *NEMMCO* and the relevant *Network Service Providers* (including the relevant *Transmission Network Service Provider* in respect of an *embedded generating unit*) the following information about the *control systems* of the *generating system*:

(i) a set of functional block diagrams, including all functions between feedback signals and *generating system* output;

(ii) the parameters of each functional block, including all settings, gains, time constants, delays, deadbands and limits; and

(iii) the characteristics of non-linear elements,

with sufficient detail for *NEMMCO* and *Network Service Providers* to perform load flow and dynamic simulation studies; and

(6) to *NEMMCO*, model source code associated with the model in subparagraph (5) in an unencrypted form suitable for at least one of

the software simulation products nominated by *NEMMCO* and in a form that would allow conversion for use with other software simulation products by *NEMMCO*.

(c) The information provided under paragraph (b) must:

(1) encompass all *control systems* that respond to *voltage* or *frequency* disturbances on the *power system*, and which are either integral to the *generating units* or otherwise part of the *generating system*, including those applying to *reactive power* equipment that forms part of the *generating system;* and

(2) conform with the applicable models developed in accordance with the *Generating System Model Guidelines*, or an alternative model agreed with *NEMMCO* to be necessary to adequately represent the *generating plant* to carry out load flow and dynamic simulations.

(d) The *Generator* must update the information provided under paragraph (b) within 3 months after commissioning tests or other tests undertaken in accordance with clause 5.7.3 are completed.

(e) For the purposes of clause 5.3.2(f), the technical information that a *Network Service Provider* must if requested provide to a *Connection Applicant* in respect of a proposed *connection* for a *generating system* includes:

(1) the highest expected single phase and three phase fault levels at the *connection point* with the *generating system* not *connected*;

(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* with the *generating system* not *connected*;

(4) technical information relevant to the *connection point* with the *generating system* not *synchronised* including equivalent source impedance information, sufficient to estimate fault levels, *voltage* fluctuations, harmonic *voltage* distortion (for harmonics relevant to the *generating system*) and *voltage* unbalance; and

(5) information relating to the performance of the *national grid* that is reasonably necessary for the *Connection Applicant* to prepare an application to *connect*, including:

(i) a model of the *power system*, including relevant *considered projects* and the range of expected operating conditions, sufficient to carry out load flow and dynamic simulations; and

(ii) information on *inter-regional* and *intra-regional power transfer capabilities* and relevant *plant* ratings.

(f) All information provided under this clause S5.2.4 is *confidential information*.

S5.2.5 Technical requirements

S5.2.5.1 Reactive power capability

Automatic access standard

(a) The *automatic access standard* is a *generating system* operating at:

(1) any level of *active power* output; and

(2) any *voltage* at the *connection point* within the limits established under clause S5.1a.4 without a *contingency event*,

must be capable of supplying and absorbing continuously at its *connection point* an amount of *reactive power* of at least the amount equal to the product of the *rated active power* of the *generating system* and 0.395.

Minimum access standard

(b) The *minimum access standard* is no capability is required to supply or absorb *reactive power* at the *connection point*.

Negotiated access standard

(c) When negotiating a *negotiated access standard*, the *Generator* and the *Network Service Provider*:

(1) must subject to any agreement under paragraph (d)(4), ensure that the *reactive power capability* of the *generating system* is sufficient to ensure that all relevant *system standards* are met before and after *credible contingency events* under normal and planned *outage* operating conditions of the *power system*, taking into account at least existing projects and *considered projects*;

(2) may negotiate either a range of *reactive power* absorption and supply, or a range of *power factor*, at the *connection point*, within which the *plant* must be operated; and

(3) may negotiate a limit that describes how the *reactive power capability* varies as a function of *active power* output due to a design characteristic of the *plant*.

(d) If the *generating system* is not capable of the level of performance established under paragraph (c)(1) the *Generator*, depending on what is reasonable in the circumstances, must:

(1) pay compensation to the *Network Service Provider* for the provision of the deficit of *reactive power* (supply and absorption) from within the *network*;

(2) install additional equipment *connecting* at the *generating system's connection point* or another location, to provide the deficit of *reactive power* (supply and absorption), and such equipment is deemed to be part of the *generating system*;

(3) reach a commercial arrangement with a *Registered Participant* to provide the deficit of *reactive power* (supply and absorption); or

(4) if the inability to meet the performance level only occurs for particular operating conditions, agree to and document as part of the proposed *negotiated access standard*, operational arrangements by which the *plant* can achieve an agreed level of performance for those operating conditions.

(e) The *Generator* may select one or more options referred to in paragraph (d).

General requirements

(f) An *access standard* must record the agreed value for *rated active power* and where relevant the method of determining the value.

(g) An *access standard* for consumption of *energy* by a *generating system* when not supplying or absorbing *reactive power* under an *ancillary services agreement* is to be established under clause S5.3.5 as if the *Generator* were a *Market Customer*.

S5.2.5.2 Quality of electricity generated

(a) For the purpose of this clause S5.2.5.2 in respect of a *synchronous generating unit*, AS 1359.101 and IEC 60034-1 are *plant standards* for harmonic *voltage* distortion.

Automatic access standard

(b) The *automatic access standard* is a *generating system* when generating and when not generating must not produce at any of its *connection points* for *generation*:

(1) *voltage* fluctuation greater than the limits allocated by the *Network Service Provider* under clause S5.1.5(a);

(2) harmonic *voltage* distortion greater than the emission limits specified by a *plant standard* under paragraph (a) or allocated by the *Network Service Provider* under clause S5.1.6(a); and

(3) *voltage* unbalance greater than the limits allocated by the *Network Service Provider* in accordance with clause S5.1.7(c).

Minimum access standard

(c) The *minimum access standard* is a *generating system* when generating and when not generating must not produce at any of its *connection points* for *generation*:

(1) *voltage* fluctuations greater than limits determined under clause S5.1.5(b);

(2) harmonic *voltage* distortion more than the lesser of the emission limits determined by the relevant *Network Service Provider* under clause S5.1.6(b) and specified by a *plant standard* under paragraph (a); and

(3) *voltage* unbalance more than limits determined under clause S5.1.7(c).

Negotiated access standard

(d) A *negotiated access standard* negotiated under this clause S5.2.5.2 must not prevent the *Network Service Provider* meeting the *system standards* or contractual obligations to existing *Network Users*.

S5.2.5.3 Generating unit response to frequency disturbances

(a) For the purposes of this clause S5.2.5.3:

normal operating frequency band, **operational frequency tolerance band**, or **extreme frequency excursion tolerance limits** are references to the widest range specified for those terms for any condition (including an "island" condition) in the *frequency operating standards* that apply to the *region* in which the *generating unit* is located.

stabilisation time and **recovery time** mean the longest times allowable for *system frequency* to remain outside the operational frequency tolerance band and the normal operating frequency band, respectively, for any condition (including an "island" condition) in the *frequency operating standards* that apply to the region in which the *generating unit* is located.

transient frequency limit and **transient frequency time** mean the values of 47.5 Hz and 9 seconds respectively, or such other values determined by the *Reliability Panel*.

Automatic access standard

(b) The *automatic access standard* is a *generating system* and each of its *generating units* must be capable of *continuous uninterrupted operation* for *frequencies* in the following ranges:

(1) the lower bound of the extreme frequency excursion tolerance limits to the lower bound of the operational frequency tolerance band for at least the stabilisation time;

(2) the lower bound of the operational frequency tolerance band to the lower bound of the normal operating frequency band, for at least the recovery time including any time spent in the range under subparagraph (1);

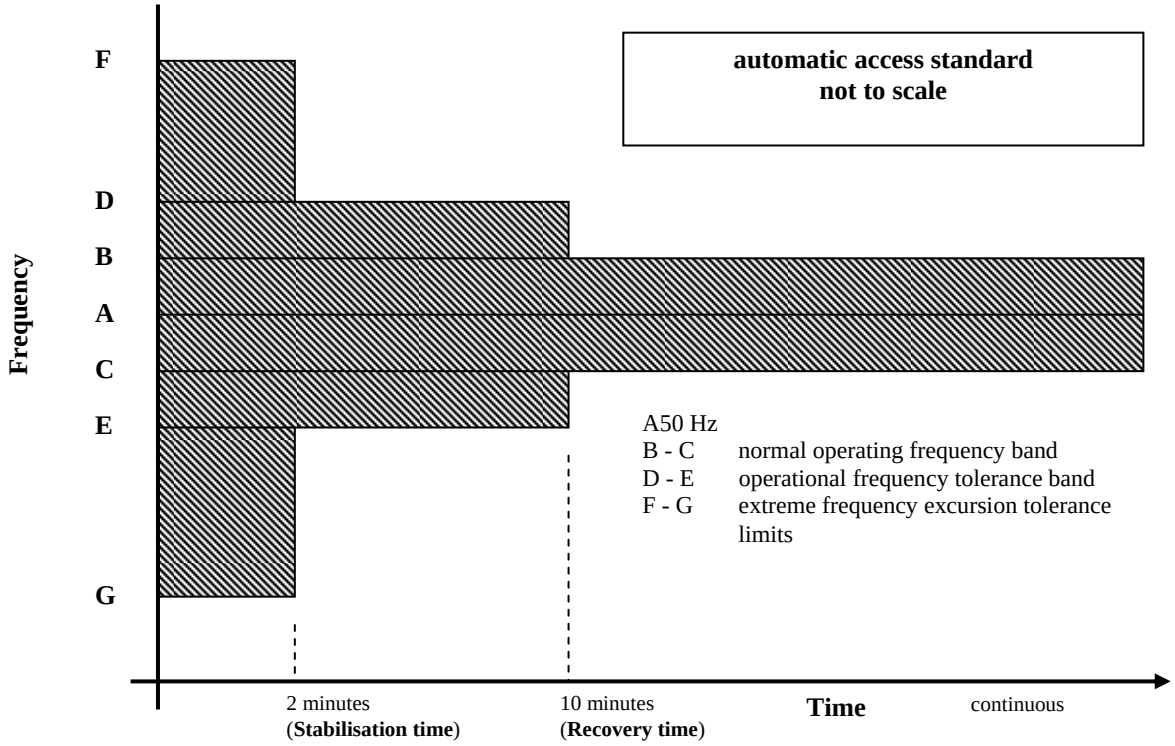
(3) the normal operating frequency band for an indefinite period;

(4) the upper bound of the normal operating frequency band to the upper bound of the operational frequency tolerance band, for at least the recovery time including any time spent in the range under subparagraph (5); and

(5) the upper bound of the operational frequency tolerance band to the upper bound of the extreme frequency excursion tolerance limits for at least the stabilisation time,

unless the rate of change of *frequency* is outside the range of –4 Hz to 4 Hz per second for more than 0.25 seconds or such other range as determined by the *Reliability Panel* from time to time.

N**ote:** The automatic access standard is illustrated in the following diagram. To the extent of any inconsistency between the diagram and paragraph (b), paragraph (b) prevails.



Minimum access standard

(c) The *minimum access standard* is a *generating system* and each of its *generating units* must be capable of *continuous uninterrupted operation* for *frequencies* in the following ranges:

(1) the lower bound of the extreme frequency excursion tolerance limits to the transient frequency limit for at least the transient frequency time;

(2) the transient frequency limit to the lower bound of the operational frequency tolerance band for at least the stabilisation time;

(3) the lower bound of the operational frequency tolerance band to the lower bound of the normal operating frequency band for at least the recovery time including any time spent in the ranges under subparagraphs (1) and (2);

(4) the normal operating frequency band for an indefinite period;

(5) the upper bound of the normal operating frequency band to the upper bound of the operational frequency tolerance band for at least the recovery time including any time spent in the ranges under subparagraph (6) unless the *generating system* has a *protection system*

to trip a *generating unit* if the *frequency* exceeds a level agreed with *NEMMCO*; and

(6) in respect a *generating system*:

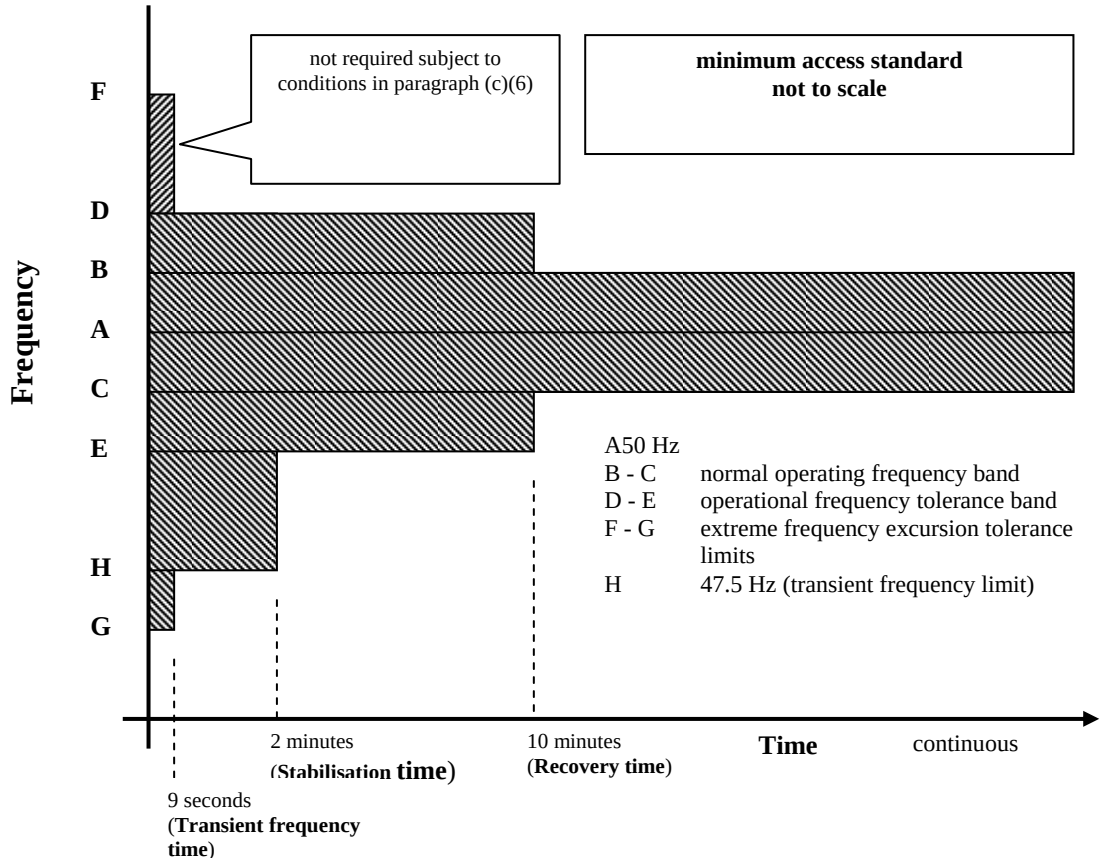
(i) of 30 MW or more; or

(ii) that does not have a *protection system* to trip the *generating unit* if the *frequency* exceeds a level agreed with *NEMMCO*,

the upper bound of the operational frequency tolerance band to the upper bound of the extreme frequency excursion tolerance limits (including an "island" condition) for at least the transient frequency time,

unless the rate of change of *frequency* is outside the range of -1 Hz to 1 Hz per second for more than one second or such other range as determined by the *Reliability Panel* from time to time.

Note: The minimum access standard is illustrated in the following diagram. To the extent of any inconsistency between the diagram and paragraph (c), paragraph (c) prevails.



Negotiated access standard

(d) A *negotiated access standard* can be accepted by the *Network Service Provider* provided that *NEMMCO* and the *Network Service Provider* agree that:

(1) the *negotiated access standard* is as close as practicable to the *automatic access standard* while respecting the need to protect the *plant* from damage;

(2) the *frequency* would be unlikely to fall below the lower bound of the operational frequency tolerance band as a result of over-frequency tripping of *generating units*; and

(3) there would be no material adverse impact on quality of *supply* to other *Network Users* or *power system security*.

(e) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.3.

S5.2.5.4 Generating system response to voltage disturbances

Automatic access standard

(a) The *automatic access standard* is a *generating system* and each of its *generating units* must be capable of *continuous uninterrupted operation* where a *power system* disturbance causes the *voltage* at the *connection point* to vary within the following ranges:

(1) *voltages* over 110% for the durations permitted under clause S5.1a.4;

(2) 90% to 110% of *normal voltage* continuously;

(3) 80% to 90% of *normal voltage* for a period of at least 10 seconds; and

(4) 70% to 80% of *normal voltage* for a period of at least 2 seconds.

Minimum access standard

(b) The *minimum access standard* is a *generating system* including all operating *generating units* must be capable of *continuous uninterrupted operation* where a *power system* disturbance causes the *voltage* at the *connection point* to vary in the range of 90% to 110% of *normal voltage*, provided that the ratio of *voltage* to *frequency* (as measured at the *connection point* and expressed as percentage of *normal voltage* and a percentage of 50 Hz) does not exceed:

(1) a value of 1.15 for more than two minutes; or

(2) a value of 1.10 for more than 10 minutes.

Negotiated access standard

(c) In negotiating a *negotiated access standard*, a *generating system* and each of its operating *generating units* must be capable of *continuous uninterrupted operation* for the range of *voltages* specified in the *automatic access standard* except where *NEMMCO* and the *Network Service Provider* agree that:

(1) the *negotiated access standard* is as close as practicable to the *automatic access standard* while respecting the need to protect the *plant* from damage;

(2) the *generating plant* that would be tripped as a result of any *voltage* excursion within levels specified by the *automatic access standard*, is not more than 100 MW or a greater limit based on what *NEMMCO* and the *Network Service Provider* both consider to be reasonable in the circumstances; and

(3) there would be no material adverse impact on the quality of *supply* to other *Network Users* or *power system security*.

(d) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.5.4, *NEMMCO* and the *Network Service Provider* must at a minimum, take into account:

(1) the expected performance of existing *networks* and *considered projects*;

(2) the expected performance of existing *generating plant* and other relevant projects; and

(3) any corresponding *performance standard* (or where no *performance standard* has been registered, the *access standard*) that allows *generating plant* to trip for *voltage* excursions in ranges specified under the *automatic access standards*.

(e) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.4.

General requirement

(f) The *access standard* must include any operational arrangements necessary to ensure the *generating system* and each of its *generating units* will meet its agreed performance levels under abnormal *network* or *generating system* conditions.

S5.2.5.5 Generating system response to disturbances following contingency events

(a) In this clause S5.2.5.5 a fault includes:

(1) a fault of the relevant type having a metallic conducting path; and

(2) a fault of the relevant type resulting from reclosure onto a fault by the operation of *automatic reclose equipment*.

Automatic access standard

(b) The *automatic access standard* is:

(1) a *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for a disturbance caused by an event that is:

(i) a *credible contingency event* other than a fault referred to in subparagraph (iv);

(ii) a three phase fault in a *transmission system* cleared by all relevant primary *protection systems*;

(iii) a two phase to ground, phase to phase or phase to ground fault in a *transmission system* cleared in:

(A) the longest time expected to be taken for a relevant *breaker fail protection system* to clear the fault; or

(B) if a *protection system* referred to in subparagraph (A) 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; and

(iv) a three phase, two phase to ground, phase to phase or phase to ground fault in a *distribution network* cleared in:

(A) the longest time expected to be taken for the *breaker fail protection system* to clear the fault; or

(B) if a *protection system* referred to in subparagraph (A) 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; and

(2) subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control, a *generating system* and each of its *generating units*, in respect of the types of fault described in subparagraphs (1)(ii) to (iv), must supply to or absorb from the *network*:

(i) to assist the maintenance of *power system voltages* during the application of 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 *generating units* (in the absence of a disturbance) for each 1% reduction (from its pre-fault level) of *connection point voltage* during the fault;

(ii) after *disconnection* of the faulted element, *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

(iii) from 100 milliseconds after *disconnection* of the faulted element, *active power* of at least 95% of the level existing just prior to the fault.

Minimum access standard

(c) The *minimum access standard* is:

(1) a *generating system* and each of its *generating units* must remain in *continuous uninterrupted operation* for the disturbance caused by an event that is:

(i) a *credible contingency event* other than a fault referred to in subparagraph (iii);

(ii) a single phase to ground, phase to phase or two phase to ground fault in a *transmission system* cleared in the longest time expected to be taken for all relevant primary *protection systems* to clear the fault unless *NEMMCO* and the *Network Service Provider* agree that:

(A) the total reduction of *generation* in the *power system* due to that fault would not exceed 100 MW;

(B) there is unlikely to be an adverse impact on quality of *supply* to other *Network Users*; and

(C) there is unlikely to be a material adverse impact on *power system security*; and

(iii) a single phase to ground, phase to phase or two phase to ground fault in a *distribution network*, cleared in the longest time expected to be taken for all relevant primary *protection systems* to clear the fault, unless *NEMMCO* and the *Network Service Provid*er agree that:

(A) the total reduction of *generation* in the *power system* due to that fault would not exceed 100 MW;

(B) there is unlikely to be a material adverse impact on quality of *supply* to other *Network Users*; and

(C) there is unlikely to be a material adverse impact on *power system security*,

provided that the event is not one that would *disconnect* the *generating unit* from the *power system* by removing *network elements* from service; and

(2) subject to any changed *power system* conditions or energy source availability beyond the *Generator's* reasonable control after *disconnection* of the faulted *element*, each *generating system* must, in respect of the types of fault described in subparagraphs (1)(ii) and (iii), deliver to the *network*, *active power* 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.

Negotiated access standard

(d) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.5.5, the *Network Service Provider* and *NEMMCO* 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.

(e) 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.

(f) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.5.

General requirement

(g) The *access 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.

S5.2.5.6 Quality of electricity generated and continuous uninterrupted operation

Minimum access standard

The *minimum access standard* is a *generating system* including each of its operating *generating units* and *reactive plant*, must not *disconnect* from the *power system* as a result of *voltage* fluctuation, harmonic *voltage* distortion and *voltage* unbalance conditions at the *connection point* within the levels specified in clauses S5.1a.5, S5.1a.6 and S5.1a.7.

S5.2.5.7 Partial load rejection

(a) For the purposes of this clause S5.2.5.7 **minimum load** means minimum *sent out generation* for continuous stable operation.

(b) This clause S5.2.5.7 does not apply to an *asynchronous generating unit*.

Automatic access standard

(c) The *automatic access standard* is a *generating unit* must be capable of *continuous uninterrupted operation* during and following a *power system load* reduction of 30% from its predisturbance level or equivalent impact from separation of part of the *power system* in less than 10 seconds, provided that the *loading level* remains above minimum load.

Minimum access standard

(d) The *minimum access standard* is a *generating unit* must be capable of *continuous uninterrupted operation* during and following a *power system load* reduction of 5% or equivalent impact from separation of part of the *power system* in less than 10 seconds provided that the *loading level* remains above minimum load.

Negotiated access standard

(e) If in accordance with clause 5.3.4A the *Generator* and the *Network Service Provider* determine a *negotiated access standard* is to apply, the *Network Service Provider* must consult *NEMMCO* to ensure that the *negotiated access standard* does not materially adversely affect *power system security*.

(f) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.7.

General requirements

(g) The actual partial load rejection performance must be recorded in the *access standards*.

S5.2.5.8 Protection of generating systems from power system disturbances

Minimum access standard

(a) The *minimum access standard* is:

(1) subject to subparagraph (2) and paragraph (e), for a *generating system* or any of its *generating units* that is required by a *Generator* or *Network Service Provider* to be automatically *disconnected* from the *power system* in response to abnormal conditions arising from the *power system*, the relevant *protection system* or *control system* must not *disconnect* the *generating system* for:

(i) conditions for which it must remain in *continuous uninterrupted operation*; or

(ii) conditions it must withstand under the *Rules*; and

(2) a *generating system* with a *nameplate rating* of 30MW or more, or *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more, *connected* to a *transmission system* must have *facilities* to automatically and rapidly reduce its *generation*:

(i) by at least half, if the *frequency* at the *connection point* exceeds a level nominated by *NEMMCO* (not less than the upper limit of the *operational frequency tolerance band*) and the duration above this *frequency* exceeds a value nominated by *NEMMCO* where the reduction may be achieved:

(A) by reducing the output of the *generating system* within 3 seconds, and holding the output at the reduced level until

the *frequency* returns to within the *normal operating frequency band*; or

(B) by disconnecting the *generating system* from the *power system* within 1 second; or

(ii) in proportion to the difference between the *frequency* at the *connection point* and a level nominated by *NEMMCO* (not less than the upper limit of the *operational frequency tolerance band*), such that the *generation* is reduced by at least half, within 3 seconds of the *frequency* reaching the upper limit of the *extreme frequency excursion tolerance limits*.

Negotiated access standard

(b) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.8.

General requirements

(c) *NEMMCO* or the *Network Service Provider* may require that an *access standard* include a requirement for the *generating system* to be automatically *disconnected* by a local or remote control scheme whenever the part of the *network* to which it is *connected* has been *disconnected* from the *national grid*, forming an island that *supplies* a *Customer*.

(d) The *access standard* must include specification of conditions for which the *generating unit* or *generating system* must trip and must not trip.

(e) Notwithstanding clauses S5.2.5.3, S5.2.5.4, S5.2.5.5, S5.2.5.6 and S5.2.5.7, a *generating system* may be automatically *disconnected* from the *power system* under any of the following conditions:

(1) in accordance with an *ancillary services agreement* between the *Generator* and *NEMMCO*;

(2) where a *load* that is not part of the *generating system* has the same *connection point* as the *generating system* and *NEMMCO* and the *Network Service Provider* agree that the *disconnection* would in effect be under-frequency *load shedding*;

(3) where the *generating system* is automatically *disconnected* under paragraph (a) or clause S5.2.5.9;

(4) where the *generating system* is automatically *disconnected* under clause S5.2.5.10 due to a failure of the *generating plant*; or

(5) in accordance with an agreement between the *Generator* and a *Network Service Provider* (including an agreement in relation to an

emergency control scheme under clause S5.1.8) to provide a service that *NEMMCO* agrees is necessary to maintain or restore *power system security* in the event of a specified *contingency event*.

(f) The *Network Service Provider* is not liable for any loss or damage incurred by the *Generator* or any other person as a consequence of a fault on either the *power system*, or within the *Generator*'s *facility*.

S5.2.5.9 Protection systems that impact on power system security

Automatic access standard

(a) The *automatic access standard* is:

(1) subject to clauses S5.1.9(k) and S5.1.9(l), primary *protection systems* must be provided to *disconnect* from the *power system* any faulted element in a *generating system* and in protection zones that include the *connection point* within the applicable *fault clearance time* determined under clause S5.1.9(a)(1);

(2) each primary *protection system* must have sufficient redundancy to ensure that a faulted element within its protection zone is *disconnected* from the *power system* within the applicable *fault clearance time* with any single protection element (including any communications *facility* upon which that *protection system* depends) out of service; and

(3) *breaker fail protection systems* must be provided to clear faults that are not cleared by the circuit breakers controlled by the primary *protection system* within the applicable *fault clearance time* determined under clause S5.1.9(a)(1).

(b) In relation to an *automatic access standard* under this clause S5.2.5.9, the *Generator* must provide redundancy in the primary *protection systems* under paragraph (a)(2) and provide *breaker fail protection systems* under paragraph (a)(3) if *NEMMCO* or the *Network Service Provider* consider that a lack of these *facilities* could result in:

(1) a material adverse impact on *power system security* or quality of *supply* to other *Network Users*; or

(2) a reduction in *inter-regional* or *intra-regional power transfer capability*,

through any mechanism including:

(3) consequential tripping of, or damage to, other *network* equipment or *facilities* of other *Network Users*, that would have a *power system security* impact; or

(4) instability that would not be detected by other *protection systems* in the *network*.

Minimum access standard

(c) The *minimum access standard* is:

(1) subject to clauses S5.1.9(k) and S5.1.9(l), *protection systems* must be provided to *disconnect* from the *power system* any faulted element within a *generating system* and in protection zones that include the *connection point* within the applicable *fault clearance time* determined under clause S5.1.9(a)(2); and

(2) if a *fault clearance time* determined under clause S5.1.9(a)(2) for a protection zone is less than 10 seconds, a *breaker fail protection system* must be provided to clear from the *power system* any fault within that protection zone that is not cleared by the circuit breakers controlled by the primary *protection system* within the applicable *fault clearance time* determined under clause S5.1.9(a)(3).

Negotiated access standard

(d) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.9.

General requirements

(e) The *Network Service Provider* and the *Generator* must cooperate in the design and implementation of *protection systems* to comply with this clause S5.2.5.9, including cooperation on:

(1) the use of *current transformer* and *voltage transformer* secondary circuits (or equivalent) of one party by the *protection system* of the other;

(2) tripping of one party's circuit breakers by a *protection system* of the other party; and

(3) co-ordination of *protection system* settings to ensure inter-operation.

(f) The *protection system* design referred to in paragraphs (a) and (c) must:

(1) be coordinated with other *protection systems*;

(2) avoid consequential *disconnection* of other *Network Users' facilities*; and

(3) take into account existing obligations of the *Network Service Provider* under *connection agreements* with other *Network Users*.

S5.2.5.10 Protection to trip plant for unstable operation

Automatic access standard

(a) The *automatic access standard* is:

(1) a *synchronous generating unit* must have a *protection system* to *disconnect* it promptly when a condition that would lead to pole slipping is detected in order to prevent pole slipping or other conditions where a *generating unit* causes *active power*, *reactive power* or *voltage* at the *connection point* to become unstable as assessed in accordance with the *power system* stability guidelines established under clause 4.3.4(h); and

(2) an *asynchronous generating unit* must have a *protection system* to *disconnect* it promptly for conditions where the *active power*, *reactive power* or *voltage* at the *connection point* becomes unstable as assessed in accordance with the guidelines for *power system* stability established under clause 4.3.4(h).

Minimum access standard

(b) The *minimum access standard* is a *generating unit* must not cause a *voltage* disturbance at the *connection point* due to sustained unstable behaviour of more than the maximum level specified in Table 7 of *Australian Standard* AS/NZS 61000.3.7:2001.

Negotiated access standard

(c) If the *Network Service Provider* and the *Generator* agree, a *protection system* may also trip any other part of the *generating system* in order to cease the instability.

(d) Notwithstanding paragraph (c), a *protection system* must be provided in the *access standard* to trip the affected *generating unit* where:

(1) the *Network Service Provider* considers it necessary to prevent consequential tripping of, or damage to, other *generating units*, *network* equipment or other *Network Users' facilities*, or

(2) *NEMMCO* considers it necessary to prevent unstable operation having an adverse impact on *power system security*.

(e) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.10

S5.2.5.11 Frequency control

(a) For the purpose of this clause S5.2.5.11:

maximum operating level means in relation to:

(1) a *non-scheduled generating unit*, the maximum *sent out generation* consistent with its *nameplate rating*;

(2) a *scheduled generating unit* or *semi-scheduled generating unit*, the maximum *sent out generation* (but not emergency *generation)* consistent with its *registered bid and offer data*;

(3) a *non-scheduled generating system*, the combined maximum *sent out generation* consistent with the *nameplate ratings* of its in-service *generating units*; and

(4) a *scheduled generating system* or *semi-scheduled generating system*, the combined maximum *sent out generation* (but not emergency *generation*) of its in-service *generating units*, consistent with its *registered bid and offer data*.

minimum operating level means in relation to:

(1) a *non-scheduled generating unit*, its minimum *sent out generation* for continuous stable operation;

(2) a *scheduled generating unit* or *semi-scheduled generating unit*, its minimum *sent out generation* for continuous stable operation consistent with its *registered bid and offer data*;

(3) a *non-scheduled generating system*, the combined *minimum operating level* of its in-service *generating units*; and

(4) a *scheduled generating system* or *semi-scheduled generating system*, the combined minimum *sent out generation* of its in-service *generating units*, consistent with its *registered bid and offer data*.

pre-disturbance level means in relation to a *generating unit* and a *frequency* disturbance, the *generating unit's* level of output just before the *system frequency* first exceeds the upper or lower limit of the *normal operating frequency band* during the *frequency* disturbance.

system frequency means the *frequency* of the *transmission system* or *distribution system* to which the *generating unit* or *generating system* is *connected*.

Automatic access standard

(b) The *automatic access standard* is:

(1) a *generating system's active power* transfer to the *power system* must not:

(i) increase in response to a rise in system frequency; or

(ii) decrease in response to a fall in system frequency;

(2) a *generating system* must be capable of automatically reducing its *active power* transfer to the *power system*:

(i) whenever the system frequency exceeds the upper limit of the *normal operating frequency band*;

(ii) by an amount that equals or exceeds the least of:

(A) 20% of its maximum operating level times the *frequency* difference between system frequency and the upper limit of the *normal operating frequency band*;

(B) 10% of its maximum operating level; and

(C) the difference between the *generating unit's* pre-disturbance level and minimum operating level, but zero if the difference is negative; and

(iii) sufficiently rapidly for the *Generator* to be in a position to offer measurable amounts of lower services to the *spot market* for *market ancillary services*; and

(3) a *generating system* must be capable of automatically increasing its *active power* transfer to the *power system*:

(i) whenever the system frequency falls below the lower limit of the *normal operating frequency band*;

(ii) by the amount that equals or exceeds the least of:

(A) 20% of its maximum operating level times the percentage *frequency* difference between the lower limit of the *normal operating frequency band* and system frequency;

(B) 5% of its maximum operating level; and

(C) one third of the difference between the *generating unit's* maximum operating level and pre-disturbance level, but zero if the difference is negative; and

(iii) sufficiently rapidly for the *Generator* to be in a position to offer measurable amounts of raise services to the *spot market* for *market ancillary services*.

Minimum access standard

(c) The *minimum access standard* is a *generating system* under relatively stable input energy, *active power* transfer to the *power system* must not:

(1) increase in response to a rise in system frequency; and

(2) decrease more than 2% per Hz in response to a fall in system frequency.

Negotiated access standard

(d) A *Generator* proposing a *negotiated access standard* in respect of paragraph (c)(2) must demonstrate to *NEMMCO* that the proposed increase and decrease in *active power* transfer to the *power system* are as close as practicable to the *automatic access standard* for that *plant*.

(e) The *negotiated access standard* must record the agreed values for maximum operating level and minimum operating level, and where relevant the method of determining the values and the values for a *generating system* must take into account its in-service *generating units*.

(f) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.11.

General requirements

(g) Each *control system* used to satisfy this clause S5.2.5.11 must be *adequately damped*.

(h) The amount of a relevant *market ancillary service* for which the *plant* may be registered must not exceed the amount that would be consistent with the *performance standard* registered in respect of this requirement.

S5.2.5.12 Impact on network capability

Automatic access standard

(a) The *automatic access standard* is a *generating system* must have *plant* capabilities and *control systems* that are sufficient so that when *connected* it does not reduce any *inter-regional* or *intra-regional power transfer capability* below the level that would apply if the *generating system* were not *connected*.

Minimum access standard

(b) The *minimum access standard* is a *generating system* must have *plant* capabilities, *control systems* and operational arrangements sufficient to ensure there is no reduction in:

(1) the ability to *supply Customer load* as a result of a reduction in *power transfer capability*; and

(2) *power transfer capabilities* into a region by more than the combined *sent out generation* of its *generating units*.

Negotiated access standard

(c) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.5.12, the *Network Service Provider* and *NEMMCO* must take into account:

(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 *automatic reclose equipment*; and

(2) the expected range of *power system* operating conditions.

(d) The *negotiated access standard* must include:

(1) *control systems* to minimise any reduction in *power transfer capabilities*; and

(2) operational arrangements, including curtailment of the *generating system's* output if necessary to ensure that the *generating plant* is operated in a way that meets at least the *minimum access standard* under abnormal *network* and *generating system* conditions, so that *power system security* can be maintained.

(e) A *negotiated access standard* under this clause S5.2.5.12 must detail the *plant* capabilities, *control systems* and operational arrangements that will be maintained by the *Generator*, notwithstanding that change to the *power system*, but not changes to the *generating system*, may reduce the efficacy of the *plant* capabilities, *control systems* and operational arrangements over time.

(f) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.12.

General requirement

(g) If a *Network Service Provider* considers that *power transfer capabilities* of its *network* would be increased through provision of additional *control system facilities* to a *generating system* (such as a *power system* stabiliser),

the *Network Service Provider* and the *Generator* may negotiate for the provision of such additional *control system facilities* as a commercial arrangement.

S5.2.5.13 Voltage and reactive power control

(a) For the purpose of this clause S5.2.5.13:

rise time means in relation to a step response test or simulation of a *control system*, the time taken for an output quantity to rise from 10% to 90% of the maximum change induced in that quantity by a step change of an input quantity.

settling time means in relation to a step response test or simulation of a *control system*, the time measured from initiation of a step change in an input quantity to the time when the magnitude of error between the output quantity and its final settling value remains less than 10% of:

(1) if the sustained change in the quantity is less than half of the maximum change in that output quantity, the maximum change induced in that output quantity; or

(2) the sustained change induced in that output quantity.

static excitation system means in relation to a *synchronous generating unit*, an *excitation control system* that does not use rotating machinery to produce the field current.

Automatic access standard

(b) The *automatic access standard* is:

(1) a *generating system* must have *plant* capabilities and *control systems* sufficient to ensure that:

(i) *power system* oscillations, for the frequencies of oscillation of the *generating unit* against any other *generating unit*, are *adequately damped*;

(ii) operation of the *generating system* does not degrade the damping of any critical mode of oscillation of the *power system*; and

(iii) operation of the *generating system* does not cause instability (including hunting of *tap-changing transformer control systems*) that would adversely impact other *Registered Participants*;

(2) a *control system* must have:

(i) for the purposes of disturbance monitoring and testing, permanently installed and operational, monitoring and recording *facilities* for key variables including each input and output; and

(ii) *facilities* for testing the *control system* sufficient to establish its dynamic operational characteristics;

(3) a *synchronous generating system* must have an *excitation control system* that:

(i) regulates *voltage* at the *connection point* or another agreed location in the *power system* (including within the *generating system*) to within 0.5% of the setpoint;

(ii) is able to operate the stator continuously at 105% of *nominal voltage* with *rated active power* output;

(iii) regulates *voltage* in a manner that helps to support *network voltages* during faults and does not prevent the *Network Service Provider* from achieving the requirements of clause S5.1a.3 and S5.1a.4;

(iv) allows the *voltage* setpoint to be continuously controllable in the range of at least 95% to 105% of *normal voltage* at the *connection point* or the agreed location, without reliance on a *tap-changing transformer*;

(v) has limiting devices to ensure that a *voltage* disturbance does not cause the *generating unit* to trip at the limits of its operating capability;

(vi) has an excitation ceiling *voltage* of at least:

(A) for a static excitation system, 2.3 times; or

(B) for other *excitation control systems*, 1.5 times,

the excitation required to achieve *generation* at the *nameplate rating* for rated *power factor*, rated speed and *nominal voltage*;

(vii) has *settling times* for a step change of *voltage* setpoint or *voltage* at the location agreed under subparagraph (i) of:

(A) generated *voltage* less than 2.5 seconds for a 5% *voltage* disturbance with the *generating unit* not *synchronised*;

(B) *active power*, *reactive power* and *voltage* less than 5.0 seconds for a 5% *voltage* disturbance with the *generating unit synchronised*, from an operating point where the

voltage disturbance would not cause any limiting device to operate; and

(C) in respect of each limiting device, *active power*, *reactive power* and *voltage* less than 7.5 seconds for a 5% *voltage* disturbance with the *generating unit synchronised*, when operating into a limiting device from an operating point where a *voltage* disturbance of 2.5% would just cause the limiting device to operate;

(viii) is able to increase field *voltage* from rated field *voltage* to the excitation ceiling *voltage* in less than:

(A) 0.05 second for a static excitation system; or

(B) 0.5 second for other *excitation control systems*;

(ix) has a *power system* stabiliser with sufficient flexibility to enable damping performance to be maximised, with characteristics as described in paragraph (c); and

(x) has reactive current compensation settable for boost or droop; and

(4) a *generating system*, other than one comprised of *synchronous generating units*, must have a *voltage control system* that:

(i) regulates *voltage* at the *connection point* or an agreed location in the *power system* (including within the *generating system*) to within 0.5% of its setpoint;

(ii) regulates *voltage* in a manner that helps to support *network voltages* during faults and does not prevent the *Network Service Provider* from achieving the requirements of clauses S5.1a.3 and S5.1a.4;

(iii) allows the *voltage* setpoint to be continuously controllable in the range of at least 95% to 105% of *normal voltage* at the *connection point* or agreed location in the *power system*, without reliance on a *tap changing transformer*;

(iv) has limiting devices to ensure that a *voltage* disturbance does not cause the *generating unit* to trip at the limits of its operating capability;

(v) with the *generating system connected* to the *power system*, has *settling times* for *active power*, *reactive power* and *voltage* due to a step change of *voltage* setpoint or *voltage* at the location agreed under clause subparagraph (i), of less than:

(A) 5.0 seconds for a 5% *voltage* disturbance with the *generating system connected* to the *power system*, from an operating point where the *voltage* disturbance would not cause any limiting device to operate; and

(B) 7.5 seconds for a 5% *voltage* disturbance with the *generating system connected* to the *power system*, when operating into any limiting device from an operating point where a *voltage* disturbance of 2.5% would just cause the limiting device to operate;

(vi) has *reactive power* rise time, for a 5% step change in the *voltage* setpoint, of less than 2 seconds;

(vii) has a *power system* stabiliser with sufficient flexibility to enable damping performance to be maximised, with characteristics as described in paragraph (c); and

(viii) has reactive current compensation.

(c) A *power system* stabiliser provided under paragraph (b) must have:

(1) for a *synchronous generating unit*, measurements of rotor speed and *active power* output of the *generating unit* as inputs, and otherwise, measurements of *power system frequency* and *active power* output of the *generating unit* as inputs;

(2) two washout filters for each input, with ability to bypass one of them if necessary;

(3) sufficient (and not less than two) lead-lag transfer function blocks (or equivalent number of complex poles and zeros) with adjustable gain and time-constants, to compensate fully for the phase lags due to the *generating plant*;

(4) an output limiter, which for a *synchronous generating unit* is continually adjustable over the range of –10% to +10% of stator *voltage*;

(5) monitoring and recording *facilities* for key variables including inputs, output and the inputs to the lead-lag transfer function blocks; and

(6) *facilities* to permit testing of the *power system* stabiliser in isolation from the *power system* by injection of test signals, sufficient to establish the transfer function of the *power system* stabiliser.

Minimum access standard

(d) The *minimum access standard* is:

(1) a *generating system* must have *plant* capabilities and *control systems*, including, if appropriate, a *power system* stabiliser, sufficient to ensure that:

(i) *power system* oscillations, for the frequencies of oscillation of the *generating unit* against any other *generating unit*, are *adequately damped*;

(ii) operation of the *generating unit* does not degrade:

(A) any mode of oscillation that is within 0.3 nepers per second of being unstable, by more than 0.01 nepers per second; and

(B) any other mode of oscillation to within 0.29 nepers per second of being unstable; and

(iii) operation of the *generating unit* does not cause instability (including hunting of *tap-changing transformer control systems*) that would adversely impact other *Registered Participants*;

(2) a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more must have *facilities* for testing its *control systems* sufficient to establish their dynamic operational characteristics;

(3) a *generating unit* or *generating system* must have *facilities*:

(i) where the *connection point nominal voltage* is 100 kV or more, to regulate *voltage* in a manner that does not prevent the *Network Service Provider* from achieving the requirements of clauses S5.1a.3 and S5.1a.4; or

(ii) where the *connection point nominal voltage* is less than 100 kV, to regulate *voltage* or *reactive power* or *power factor* in a manner that does not prevent the *Network Service Provider* from achieving the requirements of clauses S5.1a.3 and S5.1a.4,

and sufficient to achieve the performance agreed in respect of clauses S5.2.5.1, S5.2.5.2, S5.2.5.3, S5.2.5.4, S5.2.5.5, S5.2.5.6 and S5.2.5.12;

(4) a *synchronous generating unit*, that is part of a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more, must have an *excitation control system* that:

(i) regulates *voltage*, *power factor* or *reactive power* as agreed with the *Network Service Provider* and *NEMMCO*;

(ii) has excitation ceiling *voltage* of at least 1.5 times the excitation required to achieve *generation* at the *nameplate rating* for rated *power factor*, rated speed and *nominal voltage*;

(iii) subject to co-ordination under paragraph (i), has a *settling time* of less than 5.0 seconds for a 5% *voltage* disturbance with the *generating unit* synchronised, from an operating point where such a *voltage* disturbance would not cause any limiting device to operate; and

(iv) has over and under excitation limiting devices sufficient to ensure that a *voltage* disturbance does not cause the *generating unit* to trip at the limits of its operating capability; and

(5) a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more and which are *asynchronous generating units*, must have a *control system* that:

(i) regulates *voltage*, *power factor* or *reactive power* as agreed with the *Network Service Provider* and *NEMMCO*;

(ii) subject to co-ordination under subparagraph (i), has a settling time less than 7.5 seconds for a 5% *voltage* disturbance with the *generating unit* electrically connected to the *power system* from an operating point where such a *voltage* disturbance would not cause any limiting device to operate; and

(iii) has limiting devices to ensure that a *voltage* disturbance would not cause the *generating unit* to trip at the limits of its operating capability.

Negotiated access standard

(e) If a *generating system* cannot meet the *automatic access standard*, the *Generator* must demonstrate to the *Network Service Provider* why that standard could not be reasonably achieved and propose a *negotiated access standard*.

(f) The *negotiated access standard* proposed by the *Generator* under paragraph (e) must be the highest level that the *generating system* can reasonably achieve, including by installation of additional dynamic *reactive power* equipment, and through optimising its *control systems*.

(g) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.13.

General requirements

(h) A limiting device provided under paragraphs (b) and (c) must:

(1) not detract from the performance of any *power system* stabiliser; and

(2) be co-ordinated with all *protection systems*.

(i) The *Network Service Provider* may require that the design and operation of the *control systems* of a *generating unit* or *generating system* be coordinated with the existing *voltage control systems* of the *Network Service Provider* and of other *Network Users*, in order to avoid or manage interactions that would adversely impact on the *Network Service Provider* and other *Network Users*.

(j) Any requirements imposed by the *Network Service Provider* under paragraph (i) must be recorded in the *access standard*.

(k) The assessment of impact of the *generating units* on *power system* stability and damping of *power system* oscillations shall be in accordance with the guidelines for *power system* stability established under clause 4.3.4(h).

S5.2.5.14 Active power control

(a) The *automatic access standard* is a *generating system* comprised of *generating units* with a combined *nameplate rating* of 30 MW or more must have an *active power control system* capable of:

(1) for a *scheduled generating unit* or a *scheduled generating system*:

(i) maintaining and changing its *active power* output in accordance with its *dispatch instructions*; and

(ii) ramping its *active power* output linearly from one level of *dispatch* to another;

(2) subject to energy source availability, for a *non-scheduled generating unit* or *non-scheduled generating system*:

(i) automatically reducing or increasing its *active power* output within 5 minutes, at a constant rate, to or below the level specified in an instruction electronically issued by a *control centre*, subject to subparagraph (iii);

(ii) automatically limiting its *active power* output, to below the level specified in subparagraph (i); and

(iii) not changing its *active power* output within 5 minutes by more than the raise and lower amounts specified in an instruction electronically issued by a *control centre*; and

(3) subject to energy source availability, for a *semi-scheduled generating unit* or a *semi-scheduled generating system*:

(i) automatically reducing or increasing its *active power* output within 5 minutes at a constant rate, to or below the level specified in an instruction electronically issued by a *control centre*;

(ii) automatically limiting its *active power* output, to or below the level specified in subparagraph (i);

(iii) not changing its *active power* output within 5 minutes by more than the raise and lower amounts specified in an instruction electronically issued by a *control centre*; and

(iv) ramping its *active power* output linearly from one level of *dispatch* to another.

Minimum access standard

(b) The *minimum access standard* is a *generating system* comprised of *generating unit*s with a combined *nameplate rating* of 30 MW or more must have an *active power control system* capable of:

(1) for a *scheduled generating unit* or a *scheduled generating system*, maintaining and changing its *active power* output in accordance with its *dispatch instructions*;

(2) for a *non-scheduled generating system*:

(i) reducing its *active power* output, within 5 minutes, to or below the level required to manage *network* flows that is specified in a verbal instruction issued by the *control centre*;

(ii) limiting its *active power* output, to or below the level specified in subparagraph (i);

(iii) subject to energy source availability, ensuring that the change of *active power* output in a 5 minute period does not exceed a value specified in a verbal instruction issued by the *control centre*; and

(iv) being upgraded to receive electronic instructions from the *control centre* and fully implement them within 5 minutes; and

(3) for a *semi-scheduled generating unit* or a *semi-scheduled generating system*, maintaining and changing its *active power* output in accordance with its *dispatch instructions*.

Negotiated access standard

(c) A *negotiated access standard* may provide that if the number or frequency of verbal instructions becomes difficult for a *control centre* to manage, *NEMMCO* may require the *Generator* to upgrade its *facilities* to receive electronic instructions and fully implement them within 5 minutes.

(d) The *negotiated access standard* must document to *NEMMCO's* satisfaction any operational arrangements necessary to manage *network* flows that may include a requirement for the *generating system* to be operated in a manner that prevents its output changing within 5 minutes by more than an amount specified by a *control centre*.

(e) *NEMMCO* must advise on matters relating to *negotiated access standards* under this clause S5.2.5.14.

General requirements

(f) Each *control system* used to satisfy the requirements of paragraphs (a) and (b) must be *adequately damped*.

S5.2.6 Monitoring and control requirements

S5.2.6.1 Remote Monitoring

Automatic access standard

(a) The *automatic access standard* is a:

(1) *scheduled generating unit;*

(2) *scheduled generating system*;

(3) *non-scheduled generating unit* with a *nameplate rating* of 30 MW or more;

(4) *non-scheduled generating system* with a combined *nameplate rating* of 30 MW or more;

(5) *semi-scheduled generating unit*; or

(6) *semi-scheduled generating system*,

must have *remote monitoring equipment* to transmit to *NEMMCO's control centres* in real time in accordance with rule 4.11 the quantities that *NEMMCO* reasonably requires to discharge its *market* and *power system security* functions set out in Chapters 3 and 4.

(b) The quantities referred to under paragraph (a) that *NEMMCO* may request include:

(1) in respect of a *generating unit* with a *nameplate rating* of 30 MW or more:

(i) current, *voltage*, *active power* and *reactive power* in respect of *generating unit* stators or power conversion systems (as applicable);

(ii) the status of all switching devices that carry the *generation*; and

(iii) *tap-changing transformer* tap position;

(2) in respect of a *generating system* that includes a *generating unit* with a *nameplate rating* of less than 30 MW:

(i) its connected status, *tap-changing transformer* tap position and *voltages*;

(ii) *active power* and *reactive power* aggregated for groups of identical *generating units*;

(iii) either the number of identical *generating units* operating or the operating status of each non-identical *generating unit*; and

(iv) *active power* and *reactive power* for the *generating system;*

(3) in respect of an auxiliary supply system with a capacity of 30 MW or more associated with a *generating unit* or *generating system*, *active power* and *reactive power*;

(4) in respect of *reactive power* equipment that is part of a *generating system* but not part of a particular *generating unit*, its *reactive power*;

(5) in respect of a wind farm type of *generating system*:

(i) wind speed;

(ii) wind direction;

(iii) ambient temperature; and

(6) any other quantity that *NEMMCO* reasonably requires to discharge its *market* and *power system security* functions as set out in Chapters 3 and 4.

Minimum access standard

(c) The *minimum access standard* is a:

(1) *scheduled generating unit*;

(2) *scheduled generating system*;

(3) *non-scheduled generating system* with a combined *nameplate rating* of 30 MW or more;

(4) *semi-scheduled generating unit*; or

(5) *semi-scheduled generating system*,

must have *remote monitoring equipment* to transmit to *NEMMCO's control centres* in real time:

(6) the *active power* output of the *generating unit* or *generating system* (as applicable);

(7) if *connected* to a *transmission system*, the *reactive power* output of the *generating unit* or *generating system* (as applicable); and

(8) if a wind farm type of *generating system*:

(i) number of units operating;

(ii) wind speed; and

(iii) wind direction,

in accordance with rule 4.11.

Negotiated access standard

(d) *NEMMCO* may advise on matters relating to *negotiated access standards* under this clause S5.2.6.1.

S5.2.6.2 Communications equipment

Automatic access standard

(a) The *automatic access standard* is a *Generator* must:

(1) provide and maintain two separate telephone *facilities* using independent telecommunications service providers, for the purposes of operational communications between the *Generator's* responsible operator under clause 4.11.3(a) and *NEMMCO's control centre*; and

(2) provide electricity supplies for *remote monitoring equipment* and *remote control equipment* installed in relation to its *generating system* capable of keeping such equipment available for at least 3 hours following total loss of *supply* at the *connection point* for the relevant *generating unit*.

Minimum access standard

(b) The *minimum access standard* is a *Generator* must:

(1) provide and maintain a telephone facility for the purposes of operational communications between the *Generator's* responsible operator under clause 4.11.3(a) and *NEMMCO's control centre*; and

(2) provide electricity supplies for *remote monitoring equipment* and *remote control equipment* installed in relation to its *generating system* capable of keeping such equipment available for at least 1 hour following total loss of *supply* at the *connection point* for the relevant *generating unit.*

Negotiated access standard

(c) A *negotiated access standard* must include, where the *Network Service Provider* or *NEMMCO* reasonably require, a back-up telephone facility be independent of commercial telephone service providers, and the *Network Service Provider* must provide and maintain the separate facility on a cost-recovery basis only through the charge for *connection*.

(d) A *negotiated access standard* must include that a *Generator* must provide communications paths (with appropriate redundancy) from the *remote monitoring equipment* or *remote control equipment* installed for each of its *generating systems* as appropriate, to a communications interface in a location reasonably acceptable to the *Network Service Provider* at the relevant *generation* facility.

(e) Communications systems between the communications interface under paragraph (d) and the *control centre* must be the responsibility of the *Network Service Provider* unless otherwise agreed by the *Generator* and the *Network Service Provider*.

(f) A *negotiated access standard* must include that the *Generator* provide accommodation and secure power supplies for communications *facilities* provided by the *Network Service Provider* under this clause S5.2.6.2.

(g) *NEMMCO* may advise on matters relating to *negotiated access standards* under this clause S5.2.6.2.

S5.2.7 Power station auxiliary supplies

In cases where a *generating system* takes its auxiliary supplies via a *connection point* through which its *generation* is not transferred to the *network*, the *access standards* must be established under clause S5.3.5 as if the *Generator* were a *Market Customer*.

S5.2.8 Fault current

Automatic access standard

(a) The *automatic access standard* is:

(1) the contribution of the *generating system* to the fault current on the *connecting network* through its *connection point* must not exceed the contribution level that will ensure that the total fault current can be safely interrupted by the circuit breakers of the *connecting network* and safely carried by the *connecting network* for the duration of the applicable *breaker fail protection system fault clearance times*, as specified for the relevant *connection point* by the *Network Service Provider*;

(2) a *generating system's connected plant* must be capable of withstanding fault current through the *connection point* up to the higher of:

(i) the level specified in clause S5.2.4(e)(1); and

(ii) the highest level of current at the *connection point* that can be safely interrupted by the circuit breakers of the *connecting network* and safely carried by the *connecting network* for the duration of the applicable *breaker fail protection system fault clearance times*, as specified by the *Network Service Provider*; and

(3) a circuit breaker provided to isolate a *generating unit* or *generating system* from the *network* must be capable of breaking, without damage or restrike, the maximum fault currents that could reasonably be expected to flow through the circuit breaker for any fault in the *network* or in the *generating unit* or *generating system*, as specified in the *connection agreement*.

Minimum access standard

(b) The *minimum access standard* is:

(1) the *generating system* does not need to limit fault current contribution;

(2) a *generating system's connected plant* must be capable of withstanding fault current through the *connection point* up to the level specified in clause S5.2.4(e)(1); and

(3) a circuit breaker provided to isolate a *generating unit* or *generating system* from the *network* must be capable of breaking, without damage or restrike, the maximum fault currents that could reasonably be expected to flow through the circuit breaker for any fault in the

network or in the *generating unit* or *generating system*, as specified in the *connection agreement*.

Negotiated access standard

(c) In negotiating a *negotiated access standard*, the *Network Service Provider* must consider alternative *network* configurations in the determination of the applicable fault current level and must prefer those options that maintain an equivalent level of service to other *Network Users* and which, in the opinion of the *Generator*, impose the least obligation on the *Generator*.

(d) In carrying out assessments of proposed *negotiated access standards* under this clause S5.2.8, the *Network Service Provider* must take into account, without limitation:

(1) the expected performance of existing *networks* and *considered projects*;

(2) the expected performance of existing *generating plant* and other relevant projects; and

(3) the expected range of *power system* operating conditions.

Schedule 5.3 - Conditions for Connection of Customers

(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 *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.

(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).

S5.3.2 Design standards

A *Network User* must ensure that:

(a) the electrical *plant* in its *facility* complies with the relevant *Australian Standards* as applicable at the time of first installation of that electrical *plant* in the *facility*;

(b) circuit breakers provided to isolate the *Network User's facilities* from the *Network Service Provider's facilities* are capable of breaking, without damage or restrike, fault currents nominated by the *Network Service Provider* in the relevant *connection agreement*; and

(c) new equipment including circuit breakers provided to isolate the *Network User's facilities* from the *Network Service Provider's facilities* is capable of withstanding, without damage, power *frequency voltage*s and impulse levels nominated by the *Network Service Provider* to apply at the *connection point* in accordance with the relevant provisions of the *system standards* and recorded in the relevant *connection agreement*.

S5.3.3 Protection systems and settings

A *Network User* must ensure that all *connections* to the *network* are protected by protection devices which effectively and safely *disconnect* any faulty circuit automatically within a time period specified by the *Network Service Provider* in accordance with the following provisions:

(a) The *automatic access standard* is:

(1) Primary *protection systems* must be provided to *disconnect* any faulted element from the *power system* within the applicable *fault clearance time* determined under clause S5.1.9(a)(1), but subject to clauses S5.1.9(k) and S5.1.9(l).

(2) Each primary *protection system* must have sufficient redundancy to ensure that a faulted element within its protection zone is *disconnected* from the *power system* within the applicable *fault clearance time* with any single protection element (including any communications facility upon which that *protection system* depends) out of service.

(3) *Breaker fail protection systems* must be provided to clear faults that are not cleared by the circuit breakers controlled by the primary *protection system*, within the applicable *fault clearance time* determined under clause S5.1.9(a)(1).

(b) The *minimum access standard* is:

(1) Primary *protection systems* must be provided to *disconnect* from the *power system* any faulted element within their respective protection zones within the applicable *fault clearance time* determined under clause S5.1.9(a)(2), but subject to clauses S5.1.9(k) and S5.1.9(l).

(2) If a *fault clearance time* determined under clause S5.1.9(a)(2) for a protection zone is less than 10 seconds, a *breaker fail protection system* must be provided to clear from the *power system* any fault within that protection zone that is not cleared by the circuit breakers controlled by the primary *protection system*, within the applicable *fault clearance time* determined under clause S5.1.9(a)(3).

(c) The *Network Service Provider* and the *Network User* must cooperate in the design and implementation of *protection systems* to comply with this clause, including cooperation with regard to:

(1) the use of *current transformer* and *voltage transformer* secondary circuits (or equivalent) of one party by the *protection system* of the other;

(2) tripping of one party's circuit breakers by a *protection system* of the other party; and

(3) co-ordination of *protection system* settings to ensure inter-operation.

Before the *Network User's* installation is *connected* to the *Network Service Provider's transmission or distribution system* the *Network User's protection system* must be tested and the *Network User* must submit the appropriate test certificate to the *Network Service Provider*.

The application of settings of the protection scheme must be undertaken in accordance with clause S5.3.4.

S5.3.4 Settings of protection and control systems

A *Network User* must only apply settings to a *control system* or a *protection system* that are necessary to comply with performance requirements of this schedule 5.3 if the settings have been approved in writing by the *Network Service Provider* and, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, also by *NEMMCO*. A *Network User* must not allow its *plant* to take *supply* of electricity from the *power system* without such prior approval.

If a *Network User* seeks approval from the *Network Service Provider* to apply or change a setting, approval must not be withheld unless the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines that the changed setting would cause the *plant* to not comply with the relevant *performance standard* or cause an *inter-regional* or *intra-regional power transfer capability* to be reduced.

If the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines that a setting of a *control system* or *protection system* of the *plant* needs to change to comply with the relevant *performance standard* or to maintain or restore an *inter-regional* or *intra-regional power transfer capability*, the *Network Service Provider* or *NEMMCO* (as applicable) must consult with the *Network User*, and the *Network Service Provider* may request in writing that a setting be applied in accordance with the determination.

The *Network Service Provider* may also request a test to verify the performance of the relevant *plant* with the new setting.

A *Network User* who receives such a request must arrange for the notified setting to be applied as requested and for a test to be conducted as requested. After the test, the *Network User* must, on request, provide both *NEMMCO* and the *Network Service Provider* with a report of a requested test, including evidence of its success or failure. Such a report of a test is *confidential information*.

A *Network User* must not change a setting requested by the *Network Service Provider* without its prior written agreement. If the *Network Service Provider* requires a *Network User* to change a setting within 18 months of a previous request, the *Network Service Provider* must pay the *Network User* its reasonable costs of changing the setting and conducting the tests as requested.

S5.3.5 Power factor requirements

Automatic access standard: For *loads* equal to or greater than 30 percent of the *maximum demand* at the *connection point* the *power factor*s for *Network Users* and for *distribution networks connected* to another *transmission network* or *distribution network* are shown in Table S5.3.1:

Table S5.3.1

Permissible Range	
Supply Voltage (nominal)	**Power Factor Range**
> 400 kV	0.98 lagging to unity
250 kV - 400 kV	0.96 lagging to unity
50 kV - 250 kV	0.95 lagging to unity
1 kV < 50 kV	0.90 lagging to 0.90 leading

For *load* less than 30 percent of the *maximum demand* at the *connection point* a *Network Service Provider* may accept a *power factor* outside the range stipulated in Table S5.3.1 provided this does not cause the *system standards* to be violated.

Minimum access standard: A *Network Service Provider* may permit a lower lagging or leading *power factor* where the *Network Service Provider* is advised by *NEMMCO* that this will not detrimentally affect *power system security* or reduce *intra-regional* or *inter-regional power transfer capability.*

General:

If the *power factor* falls outside the relevant *performance standard* over any critical *loading* period nominated by the *Network Service Provider*, the *Network User* must, where required by the *Network Service Provider* in order to maintain satisfactory *voltage* levels at the *connection point* or to restore *intra-regional* or *inter-regional power transfer capability*, take action to ensure that the *power factor* falls within range as soon as reasonably practicable. This may be achieved by installing additional *reactive plant* or reaching a commercial agreement with the *Network Service Provider* to install, operate and maintain equivalent *reactive plant* as part of the *connection assets* or by alternative commercial arrangements with another party.

A *Registered Participant* who installs *shunt capacitors* to comply with *power factor* requirements must comply with the *Network Service Provider's* reasonable requirements to ensure that the design does not severely attenuate audio *frequency* signals used for *load* control or operations, or adversely impact on harmonic *voltage* levels at the *connection point.*

S5.3.6 Balancing of load currents

A *Network Service Provider* may require a *connected Registered Participant's load* to be balanced across all phases in order to maintain the negative sequence *voltage* at each *connection point* at less than or equal to the limits set out in Table S5.1a.1 of the *system standards* for the applicable nominal *supply voltage* level.

Automatic access standard: A *Network User* must ensure that:

(a) for *connections* at 30 kV or higher *voltage*, the current in any phase is not greater than 102 percent or less than 98 percent of the average of the currents in the three phases; and

(b) for *connections* at *voltages* less than 30 kV, that the current in any phase is not greater than 105 percent or less than 95 percent of the average of the currents in the three phases.

Minimum access standard: Where agreed with the relevant *Network Service Provider* and subject to any specific conditions imposed, a *Network User* may cause current unbalance greater than that specified in the *automatic access standard* provided the *Network User* does not cause the limits specified in clause S5.1a.7 to be exceeded at any point in the *network*.

General:

The limit to *load* current unbalance must be included in the *connection agreement* and is subject to verification of compliance by the *Network Service Provider*.

Where these requirements cannot be met the *Registered Participant* may enter into a commercial arrangement with the *Network Service Provider* for the installation of equipment to correct the phase unbalance. Such equipment must be considered as part of the *connection assets* for the *Registered Participant*.

The limit to *load* current unbalance must be included in the *connection agreement* and is subject to verification of compliance by the *Network Service Provider*.

S5.3.7 Voltage fluctuations

(a) *Automatic access standard*: The *voltage* fluctuations caused by variations in *loading level* at the *connection point*, including those arising from *energisation*, de-energisation or other operation of *plant*, must not exceed the limits determined under clause S5.1.5(a).

(b) *Minimum access standard*: The *voltage* fluctuations caused by variations in *loading level* at the *connection point*, including those arising from *energisation*, de-energisation or other operation of *plant*, must not exceed the limits determined under clause S5.1.5(b).

The *voltage* fluctuation emission limits and any specified conditions must be included in the *connection agreement*, and are subject to verification of compliance by the *Network Service Provider*.

S5.3.8 Harmonics and voltage notching

(a) *Automatic access standard*: The harmonic *voltage* distortion caused by non-linearity, commutation of power electronic equipment, harmonic resonance and other effects within the *plant*, must not exceed the limits determined under clause S5.1.6(a).

(b) *Minimum access standard*: The harmonic *voltage* distortion caused by non-linearity, commutation of power electronic equipment, harmonic resonance and other effects within the *plant*, must not exceed the limits determined under clause S5.1.6(b).

The harmonic *voltage* distortion emission limits and any special conditions must be included in the *connection agreement*, and is subject to verification of compliance by the *Network Service Provider*.

S5.3.9 Design requirements for Network Users' substations

A *Network User* must comply with the following requirements applicable to the design, station layout and choice of equipment for a *substation*:

(a) safety provisions must comply with requirements applicable to the *participating jurisdiction* notified by the *Network Service Provider*;

(b) where required by the *Network Service Provider*, appropriate interfaces and accommodation must be incorporated for communication *facilities*, remote monitoring and control and protection of *plant* which is to be installed in the *substation*;

(c) a *substation* must be capable of continuous uninterrupted operation with the levels of *voltage*, harmonics, unbalance and *voltage* fluctuation specified in the *system standards* as modified in accordance with the relevant provisions of schedule 5.1;

(d) earthing of primary *plant* in the *substation* must be in accordance with the Electricity Supply Association of Australia Safe Earthing Guide and must reduce step and touch potentials to safe levels;

(e) *synchronisation facilities* or reclose blocking must be provided if a *generating unit* is *connected* through the *substation*;

(f) secure electricity supplies of adequate capacity must be provided for *plant* performing communication, monitoring, control and protection functions;

(g) *plant* must be tested to ensure that the *substation* complies with the approved design and specifications as included in a *connection agreement*;

(h) the protection equipment required would normally include protection schemes for individual items of *plant*, back-up arrangements, auxiliary DC supplies and instrumentation *transformers*; and

(i) insulation levels of *plant* in the *substation* must co-ordinate with the insulation levels of the *network* to which the *substation* is *connected* as nominated in the *connection agreement*.

S5.3.10 Load shedding facilities

Network Users who are *Market Customers* and who have expected peak demands in excess of 10MW must provide automatic *interruptible load* in accordance with clause 4.3.5 of the *Rules*.

Load shedding procedures may be applied by *NEMMCO* in accordance with the provisions of clause 4.3.2 of the *Rules* for the shedding of all *loads* including *sensitive loads.*

Schedule 5.3a - Conditions for connection of Market Network Services

This schedule sets out obligations of *Market Network Service Providers* who *connect* to either a *transmission network* or a *distribution network*. It represents the requirements to be met for access to a *network*. Particular provisions may be varied by the *Network Service Provider* under the provisions of the *Rules* for the application of *minimum access standards* and *automatic access standards.*

This schedule includes specific provisions for the determination of *automatic access standards* and *negotiated access standards* derived from *minimum access standards* which, once determined, must be recorded together with the *automatic access standards* in a *connection agreement* and registered with *NEMMCO* as *performance standards.*

In this schedule, the term "*Network Service Provider*" applies only to the *Network Service Provider* with whom the *Market Network Service Provider* has lodged, or is considering lodging, an *application to connect*.

(a) The schedule includes, in respect of each *market network service*, provisions regarding the capability to:

(1) automatically control the transfer of real power at the *connection point* for any given set of *system* conditions within the limits permitted under the *Rules*;

(2) respond to control requirements under expected normal and abnormal conditions;

(3) comply with general requirements to meet quality of *supply* obligations in accordance with clauses S5.3a.9, S5.3a.10 and S5.3a.11 and to maintain security of *supply* to other *Registered Participants*; and

(4) automatically *disconnect* itself when necessary to prevent any damage to the *market network service facilities* or threat to *power system security*.

(b) This schedule also sets out the requirements and conditions, which (subject to clause 5.2.3 of the *Rules*) are obligations of *Market Network Service Providers* to:

(1) co-operate with the relevant *Network Service Provider* on technical matters when making a new *connection*;

(2) provide information to the *Network Service Provider* or *NEMMCO;* and

(3) observe and apply the relevant provisions of the *system standards* contained in schedule 5.1a in relation to the planning, design and operation of its *market network service facilities*.

(c) This schedule does not set out arrangements by which a *Market Network Service Provider* may enter into an agreement or contract with *NEMMCO* to:

(1) provide additional services that are necessary to maintain *power system security*; or

(2) provide additional service to facilitate management of the *market*.

S5.3a.1 Provision of Information

(a) Before a *Market Network Service Provider connects* any new or additional equipment to a *network*, the *Market Network Service Provider* 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 *Market Network Service Provider*;

(3) a general arrangement locating all relevant 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.

(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* of a *market network service facility* 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 S5.3a.1(b).

S5.3a.2 Application of settings

A *Market Network Service Provider* must only apply settings to a *control system* or a *protection system* that are necessary to comply with performance requirements of this schedule 5.3a if the settings have been approved in writing by the *Network Service Provider* and, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, also by *NEMMCO*. A *Market Network Service Provider* must not allow its *market network service facilities* to take electricity from the *power system* without such prior approval.

If a *Market Network Service Provider* seeks approval from the *Network Service Provider* to apply or change a setting, approval must not be withheld unless the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines that the changed setting would cause the *market network service facilities* to not comply with the relevant *performance standard* or cause an *inter-regional* or *intra-regional power transfer capability* to be reduced.

If the *Network Service Provider* or, if the requirement is one that would involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*, *NEMMCO*, reasonably determines

that a setting of a *market network service facility's control system* or *protection system* needs to change to comply with the relevant *performance standard* or to maintain or restore an *inter-regional* or *intra-regional power transfer capability*, the *Network Service Provider* or *NEMMCO* (as applicable) must consult with the *Market Network Service Provider*, and may request in writing that a setting be applied in accordance with the determination.

The *Network Service Provider* may also request a test to verify the performance of the relevant *plant* with the new setting. The *Network Service Provider* must provide *NEMMCO* with a copy of its request to a *Market Network Service Provider* to apply a setting or to conduct a test.

A *Market Network Service Provider* who receives such a request must arrange for the notified setting to be applied as requested and for a test to be conducted as requested. After the test, the *Market Network Service Provider* must, on request, provide both *NEMMCO* and the *Network Service Provider* with a report of a requested test, including evidence of its success or failure. Such a report of a test is *confidential information*.

A *Market Network Service Provider* must not change a setting requested by the *Network Service Provider* without its prior written agreement. If the *Network Service Provider* requires a *Market Network Service Provider* to change a setting within 18 months of a previous request, the *Network Service Provider* must pay the *Market Network Service Provider* its reasonable costs of changing the setting and conducting the tests as requested.

S5.3a.3 Technical matters to be co-ordinated

A *Market Network Service Provider* and the relevant *Network Service Provider* must use all reasonable endeavours to agree upon the following matters in respect of each new or altered *connection* of a *market network service facility* to a *network*:

(a) design at the *connection point*;

(b) physical layout adjacent to the *connection point*;

(c) primary protection and backup protection (clause S5.3a.6);

(d) control characteristics (clause S5.3a.4);

(e) communications and alarms (clause S5.3a.4);

(f) insulation co-ordination and lightning protection;

(g) fault levels and *fault clearance times*;

(h) switching and *isolation facilities*;

(i) interlocking arrangements; and

(j) *metering installations* as described in Chapter 7 of the *Rules*.

S5.3a.4 Monitoring and control requirements

S5.3a.4.1 Remote Monitoring

(a) *Automatic access standard*:

(1) Each *market network service facility* must have *remote monitoring equipment* to transmit to *NEMMCO's control centres* in real time, the quantities that *NEMMCO* reasonably requires to discharge its *market* and *power system security* functions as set out in Chapters 3 and 4 of the *Rules* respectively.

(2) The quantities may include such data as current, *voltage*, *active power*, *reactive power*, operational limits and critical temperatures in respect of *connection points* and power conversion systems.

(b) *Minimum access standard*:

(1) Each *market network service facility* must have *remote monitoring equipment* to transmit to *NEMMCO's control centres* in real time:

(A) *connection point active power* flow, *reactive power* flow and *voltage*;

(B) *active power*, *reactive power* and *voltage* for AC power lines, *transformers* and *busbars*, and power and *voltage* (or alternatively current) for DC power lines; and

(C) the status of circuit breakers.

(c) The negotiation of access standards in relation to this clause S5.3a.4.1 must involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*.

S5.3a.4.2 [Deleted]

S5.3a.4.3 Communications equipment

A *Market Network Service Provider* must provide electricity *supplies* for *remote monitoring equipment* and *remote control equipment* installed in relation to its *market network service facilities* capable of keeping such equipment available for at least three hours following total loss of *supply* at the *connection point* for the relevant *market network service facility*.

A *Market Network Service Provider* must provide communications paths (with appropriate redundancy) from the *remote monitoring equipment* or *remote control equipment* installed at any of its *market network service facilities* to a communications interface in a location reasonably acceptable to the *Network Service Provider* at the relevant *connection point.* Communications systems between this communications interface and the *control centre* are the responsibility of the *Network Service Provider* unless otherwise agreed by the *Market Network Service Provider* and the *Network Service Provider*.

Telecommunications between *Network Service Providers* and *Market Network Service Providers* for *operational communications* must be established in accordance with the requirements set down below.

(a) Primary Speech Facility

The relevant *Network Service Provider* must provide and maintain equipment by means of which routine and emergency control telephone calls may be established between the *Market Network Service Provider's* responsible Engineer/Operator and *NEMMCO*.

The *facilities* to be provided, including the interface requirement between the *Network Service Provider's* equipment and the *Market Network Service Provider's* equipment, must be specified by the *Network Service Provider*.

The costs of the equipment must be recovered by the *Network Service Provider* only through the charge for *connection.*

(b) Back-up Speech Facility

Where the *Network Service Provider* or *NEMMCO* reasonably determines that a back-up speech *facility* to the primary *facility* is required, the *Network Service Provider* must provide and maintain a separate telephone link or radio installation on a cost-recovery basis only through the charge for *connection.*

The *Network Service Provider* is responsible for radio system planning and for obtaining all necessary radio licences.

S5.3a.5 Design standards

A *Market Network Service Provider* must ensure that:

(a) the electrical *plant* in its *facility* complies with the relevant *Australian Standards* as applicable at the time of first installation of that electrical *plant* in the *facility*;

(b) circuit breakers provided to isolate the *Market Network Service Provider's facilities* from the *Network Service Provider's facilities* are capable of breaking, without damage or restrike, fault currents nominated by the *Network Service Provider* in the relevant *connection agreement*; and

(c) all new equipment including circuit breakers provided to isolate the *Market Network Service Provider's facilities* from the *Network Service Provider's facilities* is capable of withstanding, without damage, power *frequency voltages* and impulse levels nominated by the *Network Service Provider* in accordance with the relevant provisions of the *system standards* and recorded in the relevant *connection agreement*.

S5.3a.6 Protection systems and settings

A *Market Network Service Provider* must ensure that all *connections* to the *network* are protected by protection devices which effectively and safely *disconnect* any faulty circuit automatically within a time period specified by the *Network Service Provider* in accordance with the following provisions:

(a) The *automatic access standard* is:

(1) Primary *protection systems* must be provided to *disconnect* any faulted element from the *power system* within the applicable *fault clearance time* determined under clause S5.1.9(a)(1), but subject to clauses S5.1.9(k) and S5.1.9(l).

(2) Each primary *protection system* must have sufficient redundancy to ensure that a faulted element within its protection zone is *disconnected* from the *power system* within the applicable *fault clearance time* with any single protection element (including any communications facility upon which that *protection system* depends) out of service.

(3) *Breaker fail protection systems* must be provided to clear faults that are not cleared by the circuit breakers controlled by the primary *protection system*, within the applicable *fault clearance time* determined under clause S5.1.9(a)(1).

(b) The *minimum access standard* is:

(1) Primary *protection systems* must be provided to *disconnect* from the *power system* any faulted element within their respective protection zones within the applicable *fault clearance time* determined under clause S5.1.9(a)(2), but subject to clauses S5.1.9(k) and S5.1.9(l).

(2) If a *fault clearance time* determined under clause S5.1.9(a)(2) for a protection zone is less than 10 seconds, a *breaker fail protection system* must be provided to clear from the *power system* any fault within that protection zone that is not cleared by the circuit breakers

controlled by the primary *protection system*, within the applicable *fault clearance time* determined under clause S5.1.9(a)(3).

(c) The *Network Service Provider* and the *Market Network Service Provider* must cooperate in the design and implementation of *protection systems* to comply with this clause, including cooperation with regard to:

(1) the use of *current transformer* and *voltage transformer* secondary circuits (or equivalent) of one party by the *protection system* of the other;

(2) tripping of one party's circuit breakers by a *protection system* of the other party; and

(3) co-ordination of *protection system* settings to ensure inter-operation.

The *Market Network Service Provider* must ensure that the protection settings of its protective equipment grade with the *Network Service Provider's transmission system* or *distribution system* protection settings. Similarly the grading requirements of fuses must be co-ordinated with the *Network Service Provider*. The *Market Network Service Provider* must provide details of the protection scheme implemented by the *Market Network Service Provider* to the *Network Service Provider* and must liaise with the *Network Service Provider* when determining gradings and settings.

The application of settings of the protection scheme must be undertaken in accordance with clause S5.3a.2.

Before the *Market Network Service Provider's* installation is *connected* to the *Network Service Provider's transmission or distribution system* the *Market Network Service Provider's protection system* must be tested and the *Market Network Service Provider* must submit the appropriate test certificate to the *Network Service Provider*.

S5.3a.7 [Deleted]

S5.3a.8 Reactive power capability

Subject to the access standards stated in this clause S5.3a.8, if additional *reactive support* is required as a result of the *connection* or operation of the *network elements* which provide a *market network service* then the requisite *reactive support* must be supplied or paid for by the *Market Network Service Provider*.

Additional reactive support is required if, at rated power output as measured at the *connection point* of the *market network service* the *market network service* has a lagging power factor of less than 0.9 or a leading power factor of less than 0.95.

Automatic access standard: For power export, at rated power output and target *network voltage* as determined in accordance with clause S5.1a.4 of the *system standards* when measured at the *connection point* of the *market network service*, the *market network service* must be capable of operation in the range from a lagging power factor of 0.9 to a leading power factor of 0.95. For power import, the power factor must satisfy the requirements of clause S5.3.5 of schedule 5.3.

Minimum access standard: With the agreement of *NEMMCO* and the *Network Service Provider*, a power factor capability less than that defined by the *automatic access standard* may be provided if the requirements of the *system standards* are satisfied under all operating conditions of the *market network service*.

S5.3a.9 Balancing of load currents

A *Network Service Provider* may require a *Market Network Service Provider's power transfer* to be balanced at a *connection point* in order to maintain the negative sequence *voltage* at each connection point at less than or equal to the limits set out in Table S5.1a.1 of the *system standards* for the applicable nominal *supply voltage* level.

Automatic access standard: A *Market Network Service Provider* must ensure that for *connections* at 11kV or higher *voltage*, the current in any phase drawn by its equipment from the *Network Service Provider's network* is not greater than 102 percent or less than 98 percent of the average of the currents in the three phases.

Minimum access standard: Where agreed with the relevant *Network Service Provider* and subject to any specific conditions imposed, a *Market Network Service Provider* may cause current unbalance greater than that specified in the *automatic access standard* provided the *Market Network Service Provider* does not cause the limits specified in clause S5.1a.7 of the *system standards* to be exceeded at any point in the *network.*

Where these requirements cannot be met the *Market Network Service Provider* may enter into a commercial arrangement with the *Network Service Provider* for the installation of equipment to correct the phase unbalance. Such equipment must be considered as part of the *connection assets* for the *Market Network Service Provider*.

The limit to *power transfer* current unbalance must be included in the *connection agreement* and is subject to verification of compliance by the *Network Service Provider*.

S5.3a.10 Voltage fluctuations

(a) *Automatic access standard*: The *voltage* fluctuations caused by variations in *loading level* at the *connection point*, including those arising from

energisation, de-energisation or other operation of *plant*, must not exceed the limits determined under clause S5.1.5(a).

(b) *Minimum access standard*: The *voltage* fluctuations caused by variations in *loading level* at the *connection point*, including those arising from *energisation*, de-energisation or other operation of *plant*, must not exceed the limits determined under clause S5.1.5(b).

The *voltage* fluctuation emission limits and any specified conditions must be included in the *connection agreement*, and are subject to verification of compliance by the *Network Service Provider*.

S5.3a.11 Harmonics and voltage notching

(a) *Automatic access standard*: The harmonic *voltage* distortion caused by non-linearity, commutation of power electronic equipment, harmonic resonance and other effects within the *plant*, must not exceed the limits determined under clause S5.1.6(a).

(b) *Minimum access standard*: The harmonic *voltage* distortion caused by non-linearity, commutation of power electronic equipment, harmonic resonance and other effects within the *plant*, must not exceed the limits determined under clause S5.1.6(b).

A *Market Network Service Provider* must ensure that all of its *plant connected* to a *transmission network* or *distribution network* is capable of withstanding the effects of harmonic levels produced by that *plant* plus those imposed from the *network*.

The harmonic *voltage* distortion emission limits and any special conditions must be included in the *connection agreement*, and are subject to verification of compliance by the *Network Service Provider*.

S5.3a.12 Design requirements for Market Network Service Providers' substations

A *Market Network Service Provider* must comply with the following requirements applicable to the design, station layout and choice of equipment for a *substation*:

(a) safety provisions must comply with requirements applicable to the *participating jurisdiction* notified by the *Network Service Provider*;

(b) where required by the *Network Service Provider*, appropriate interfaces and accommodation must be incorporated for communication *facilities*, remote monitoring and control and protection of *plant* which is to be installed in the *substation*;

(c) a *substation* must be capable of continuous uninterrupted operation with the levels of *voltage*, harmonics, unbalance and *voltage* fluctuation specified in the *system standards* as modified in accordance with the relevant provisions of schedule 5.1;

(d) earthing of primary *plant* in the *substation* must be in accordance with the Electricity Supply Association of Australia Safe Earthing Guide and must reduce step and touch potentials to safe levels;

(e) *synchronisation facilities* or reclose blocking must be provided if necessary;

(f) secure electricity supplies of adequate capacity must be provided for *plant* performing communication, monitoring, control and protection functions;

(g) *plant* must be tested to ensure that the *substation* complies with the approved design and specifications as included in a *connection agreement*;

(h) the protection equipment required would normally include protection schemes for individual items of *plant*, back-up arrangements, auxiliary DC supplies and instrumentation *transformers*; and

(i) insulation levels of *plant* in the *substation* must co-ordinate with the insulation levels of the *network* to which the *substation* is *connected* as nominated in the *connection agreement*.

S5.3a.13 Market network service response to disturbances in the power system

(a) Each *market network service* must be capable of continuous uninterrupted operation during the occurrence of:

(1) *power system frequency* within the *frequency operating standards*; or

(2) the range of *voltage* variation conditions permitted by the *system standards*.

(b) The equipment associated with each *market network service* must be designed to withstand without damage or reduction in life expectancy the harmonic distortion and *voltage* unbalance conditions determined to apply in accordance with the provisions of schedule 5.1, clauses S5.1.6 and S5.1.7, respectively, at the *connection point*.

S5.3a.14 Protection of market network services from power system disturbances

(a) *Minimum access standard*: If a *Connection Applicant* requires that its *market network service facility* be automatically *disconnected* from the *power system* in response to abnormal conditions arising from the *power*

system, the relevant *protection system* or *control system* must not *disconnect* the *facility* for conditions under which it must continuously operate or must withstand under a provision of the *Rules*.

(b) There is no *automatic access standard* for this technical requirement.

(c) For the purposes of this clause S5.3a.14, the abnormal conditions include:

(1) *frequency* outside the *extreme frequency excursion tolerance limits*;

(2) sustained and uncontrollable DC current beyond a short term current rating for the period assigned to that rating;

(3) DC *voltage* above the *voltage* maximum rating or sustained below any lower limit for stable operation;

(4) *voltage* to *frequency* ratio beyond *a transformer* magnetic flux based *voltage* to *frequency* rating;

(5) sustained *voltage* fluctuations at the *connection point* beyond the level determined under clause S5.1.5(a);

(6) sustained harmonic *voltage* distortion at the *connection point* beyond the level determined under clause S5.1.6(a);

(7) sustained negative phase sequence *voltage* at the *connection point* beyond the level determined under clause S5.1.7(a); and

(8) any similar condition agreed between the *Market Network Service Provider* and *NEMMCO* after consultation with each relevant *Network Service Provider*.

(d) The negotiation of access standards in relation to this clause S5.3a.14 must involve *NEMMCO* under clause 5.3.4A(c) of the *Rules*.

(e) The *Network Service Provider* is not liable for any loss or damage incurred by the *Market Network Service Provider* or any other person as a consequence of a fault on either the *power system*, or within the *Market Network Service Provider's facility*.

Schedule 5.4 - Information to be Provided with Preliminary Enquiry

The following items of information are required to be submitted with a preliminary enquiry for *connection* or modification of an existing *connection*:

(a) Type of *plant* - (eg. gas turbine *generating unit*; rolling mill, etc.).

(b) Preferred site location - (listing any alternatives in order of preference as well).

(c) Maximum power *generation* or demand of whole *plant* - (maximum MW and/or MVA, or average over 15 minutes or similar).

(d) Expected *energy* production or consumption (MWh per month).

(e) *Plant* type and configuration - (eg. number and type of *generating units* or number of separate production lines).

(f) Nature of any disturbing *load* (size of disturbing component MW/MVAr, duty cycle, nature of power electronic *plant* which may produce harmonic distortion).

(g) Technology of proposed *generating unit* (e.g. *synchronous generating unit*, induction generator, photovoltaic array, etc).

(h) When *plant* is to be in service - (eg. estimated date for each *generating unit*).

(i) Name and address of enquirer, and, if relevant, of the party for whom the enquirer is acting.

(j) Other information may be requested by the *Network Service Provider*, such as amount and timing of power required during construction or any auxiliary power requirements.

Schedule 5.5 - Technical Details to Support Application for Connection and Connection Agreement

S5.5.1 Various sections of the *Rules* require that *Registered Participants* submit technical data to the *Network Service Provider*. This schedule lists the range of data which may be required. The actual data required will be advised by the *Network Service Provider*, and will form part of the technical specification in the *connection agreement*. These data will also be made available to *NEMMCO* and to other *Network Service Provider*s by the *Network Service Provider* at the appropriate time.

S5.5.2 Data is coded in categories, according to the stage at which it is available in the build-up of data during the process of forming a *connection* or obtaining access to a *network*, with data acquired at each stage being carried forward, or enhanced in subsequent stages, eg. by testing.

Preliminary system planning data

This data is required for submission with the *application to connect*, to allow the *Network Service Provider* to prepare an offer of terms and conditions for a *connection agreement* and to assess the requirement for, and effect of, *network augmentation* or *extension* options. Such data is normally limited to the items denoted as Standard Planning Data (S) in the *Generating System Model Guidelines*, *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* and in schedules 5.5.3 to 5.5.5.

The *Network Service Provider* may, in cases where there is reasonable doubt as to the viability of a proposal, require the submission of other data before making an offer to *connect* or to amend a *connection agreement*.

Registered system planning data

This is the class of data which will be included in the *connection agreement* signed by both parties. It consists of the preliminary system planning data plus those items denoted in the attached schedules as Detailed Planning Data (D). The latter must be submitted by the *Registered Participant* in time for inclusion in the *connection agreement*.

Registered data

Registered Data consists of data validated and agreed between the *Network Service Provider* and the *Registered Participant*, such data being:

(a) prior to actual *connection* and provision of access, data derived from manufacturers' data, detailed design calculations, works or site tests etc. (R1); and

(b) after connection, data derived from on-system testing (R2).

All of the data will, from this stage, be categorised and referred to as Registered Data; but for convenience the schedules omit placing a higher ranked code next to items which are expected to already be valid at an earlier stage.

S5.5.3 Data will be subject to review at reasonable intervals to ensure its continued accuracy and relevance. The *Network Service Provider* must initiate this review. A *Registered Participant* may *change* any data item at a time other than when that item would normally be reviewed or updated by submission to the *Network Service Provider* of the revised data, together with authentication documents, eg. test reports.

The *Network Service Provider* must supply data relating to its system to other *Network Service Provider*s for planning purposes and to other *Registered Participants* and *NEMMCO* as specified in the various sections of the *Rules*, including through the *statement of opportunities*.

S5.5.4 Schedules 5.5.3 to 5.5.5 cover the following data areas:

(a) schedule 5.5.3 - Network Plant Technical Data. This comprises fixed electrical parameters.

(b) schedule 5.5.4 - Plant and Apparatus Setting Data. This comprises settings which can be varied by agreement or by direction of the *Network Service Provider* or *NEMMCO*.

(c) schedule 5.5.5 - *Load* Characteristics. This comprises the estimated design parameters of *loads*.

The documents and schedules applicable to each class of *Registered Participant* are as follows:

(a) *Generators*: the *Generating System Model Guidelines*, *Generating System Design Data Sheet* and *Generating System Setting Data Sheet*;

(b) *Customers* and *Network Service Providers*: schedules 5.5.3 and 5.5.4; and

(c) *Customers:* schedule 5.5.5.

S5.5.5 A *Generator* that *connects* a *generating system*, that is an *asynchronous generating unit*, must be given exemption from complying with those parts of the *Generating System Model Guidelines*, *Generating System Design Data Sheet* and *Generating System Setting Data Sheet* that are determined by the *Network Service Provider* to be not relevant to such *generating systems*, but must comply with those parts of schedules 5.5.3, 5.5.4, and 5.5.5 that are relevant to such *generating systems*, as determined by the *Network Service Provider*.

S5.5.6 A *Generator* that *connects* a *generating unit* equal to or smaller than 30 MW or a number of *generating units* totalling less than 30 MW to a *connection point* to a *distribution network* will usually be required to submit less registered system planning data and less registered data than is indicated in the *Generating System Model Guidelines*, *Generating System Design Data Sheet* and *Generating System Setting Data Sheet*. In general these data will be limited to confirmation of the preliminary system planning data, marked (S), but other data must be supplied if reasonably required by the *Network Service Provider* or *NEMMCO*.

Codes:

S = Standard Planning Data

D = Detailed Planning Data

R = Registered Data (R1 pre-*connection*, R2 post-*connection*)

S5.5.7

(a) *NEMMCO* must, subject to paragraph (b), develop and *publish* by 1 March 2008, in accordance with the *Rules consultation procedures:*

(1) a *Generating System Design Data Sheet* describing, for relevant technologies, the *generating system* design parameters of *generating units* and *generating systems* including *plant* configurations, impedances, time constants, non-linearities, ratings and capabilities, to be provided under clauses S5.2.4 and this schedule 5.5;

(2) a *Generating System Setting Data Sheet* describing, for relevant *generation* and *control system* technologies, the *protection system* and *control system* settings of *generating units* and *generating systems* including configurations, gains, time constants, delays, deadbands, non-linearities and limits, to be provided under clauses S5.2.4 and this schedule 5.5; and

(3) *Generating System Model Guidelines* describing, for relevant *generation* and *control system* technologies, *NEMMCO's* requirements when developing mathematical models for *generating units* and *generating systems*, including the impact of their *control systems* and *protection systems* on *power system security*,

and there must be a *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* and *Generating System Model Guidelines* in place at all times after that date.

(b) When developing and *publishing* the *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* and *Generating System Model Guidelines* under paragraph (a), *NEMMCO* must have regard to the purpose of developing and *publishing* the sheets and guidelines which is to:

(1) allow *generating units* and *generating systems* to be mathematically modelled by *NEMMCO* in load flow and dynamic stability assessments 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) proposed *access standards* and *performance standards* of *generating units* and *generating systems* to be assessed; and

(iii) settings of *control systems* and *protection systems* of *generating units*, *generating systems* and *networks* to be assessed and quantified for maximum practical performance of the *power system;* and

(2) identify for each type of data its category in terms of clause S5.5.2.

(c) Any person may submit a request (with written reasons) to *NEMMCO* to amend the *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* or the *Generating System Model Guidelines* and *NEMMCO* must conduct the *Rules consultation procedures* in relation to the request.

(d) *NEMMCO* can make amendments requested under paragraph (c) or otherwise to the *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* or the *Generating System Model Guidelines* without conducting the *Rules consultation procedures* if the amendment is minor or administrative in nature.

(e) *NEMMCO* may at the conclusion of the *Rules consultation procedures* under paragraph (c) or otherwise under paragraph (d), amend the relevant data sheet or guidelines (if necessary).

Schedule 5.5.1 - [Deleted]

Schedule 5.5.2 - [Deleted]

Schedule 5.5.3 - Network and plant technical data of equipment at or near connection point

Data Description	Units	Data Category
Voltage Rating		
Nominal v*oltage*	kV	S, D
Highest *voltage*	kV	D

Data Description	Units	Data Category
Insulation Co-ordination		
Rated lightning impulse withstand *voltage*	kVp	D
Rated short duration power *frequency* withstand *voltage*	kV	D
Rated Currents		
Circuit maximum current	kA	S, D
Rated Short Time Withstand Current	kA for seconds	D
Ambient conditions under which above current applies	Text	S,D
Earthing		
System Earthing Method	Text	S, D
Earth grid rated current	kA for seconds	D
Insulation Pollution Performance		
Minimum total creepage	mm	D
Pollution level	Level of *IEC* 815	D
Controls		
Remote control and data transmission arrangements	Text	D
Metering Provided by Customer		
Measurement *transformer* ratios:		D
Current transformers	A/A	D
Voltage transformers	V/kV	D
Measurement *Transformer* Test Certification details	Text	R1

Data Description	Units	Data Category
Network Configuration		
Operation Diagrams showing the electrical circuits of the existing and proposed main *facilities* within the *Registered Participant's* ownership including *busbar* arrangements, phasing arrangements, earthing arrangements, switching *facilities* and operating *voltage*s.	Single line Diagrams	S, D, R1
Network Impedance		
For each item of *plant*: details of the positive, negative and zero sequence series and shunt impedance, including mutual coupling between physically adjacent elements.	% on 100 MVA base	S, D, R1
Short Circuit Infeed to the Network		
Maximum generator 3-phase short circuit infeed including infeeds from *generating units connected* to the *Registered Participant's system*, calculated by method of AS 3851 (1991).	kA symmetrical	S, D, R1
The total infeed at the instant of fault (including contribution of induction motors).	kA	D, R1
Minimum zero sequence impedance of *Registered Participant's network* at *connection point*.	% on 100 MVA base	D, R1
Minimum negative sequence impedance of *Registered Participant's network* at *connection point*.	% on 100 MVA base	D, R1
Load Transfer Capability:		
Where a *load*, or group of *loads*, may be fed from alternative *connection points*:		
Load normally taken from *connection point* X	MW	D, R1
Load normally taken from *connection point* Y	MW	D, R1
Arrangements for transfer under planned or fault *outage* conditions	Text	D
Circuits Connecting Embedded Generating		

Data Description	Units	Data Category
Units to the Network:		
For all g*enerating units*, all connecting lines/cables, *transformers* etc.		
Series Resistance	% on 100 MVA base	D, R
Series Reactance	% on 100 MVA base	D, R
Shunt Susceptance	% on 100 MVA base	D, R
Normal and short-time emergency ratings	MVA	D,R
Technical Details of *generating units* and *generating systems* as per the *Generating System Design Data Sheet*, *Generating System Setting Data Sheet* and the *Generating System Model Guidelines* where such details are not *confidential information*		
Transformers* at *connection points:		
Saturation curve	Diagram	R
Equipment associated with DC Links		
Number of poles	MVA	D,R
Converters per station	Quantity	D,R
Reactive Power consumption of converters	MCAr	D,R
Location and Rating of A.C. Filters	MVAr	D,R
Location and Rating of Shunt Capacitors	MVAr	D,R
Location and Rating of Smoothing *Reactor*	MVAr	D,R
Location and Rating of DC Filter	MVAr	D,R

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	ohms or %	S, D

Data Description	Units	Data Category
cables	on 100 MVA base	
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
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	diagrams	

Data Description	Units	Data Category
and remote)		
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
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

Schedule 5.5.5 - Load Characteristics at Connection Point

Data Description	Units	Data Category
For all Types of Load		
Type of *Load* eg controlled rectifiers or large motor drives	Text	S
For Fluctuating Loads		
Cyclic variation of *active power* over period	Graph MW/time	S
Cyclic variation of *reactive power* over period	Graph MVAr/time	S
Maximum rate of change of *active power*	MW/s	S
Maximum rate of change of *reactive power*	MVAr/s	S

Data Description	Units	Data Category
Shortest Repetitive time interval between fluctuations in active and *reactive power* reviewed annually	s	S
Largest Step Change:		
In *active power*	MW	S
In *reactive power*	MVAr	S

Schedule 5.6 - Terms and Conditions of Connection agreements

The *connection agreements* must contain the specific conditions that have been agreed to for *connection* and access to the *transmission* or *distribution network*, including but not limited to:

(a) details of the *connection point* including the *distribution network coupling points* where appropriate;

(b) *metering* arrangements and adjustments for losses where the point of *metering* is significantly different to the *connection point*;

(c) authorised demand which may be taken or supplied at the *connection point* (under specified conditions);

(c1) details of each *access standard* agreed between the *Network Service Provider* and the *Registered Participant* and all related conditions of agreement resulting from the application of any access provisions contained in schedule 5.1 for *Network Service Providers*, or schedule 5.2 for *Generators*, or schedule 5.3 for *Customers*, or schedule 5.3a for *Market Network Service Providers*;

(d) *connection service* charges;

(e) payment conditions;

(f) duration and termination conditions of the *connection agreement*;

(g) terms, conditions and *constraints* that have been agreed to for *connection* to the *network* to protect the legitimate interest of the *Network Service Provider*s including rights to *disconnect* the *Registered Participant* for breach of commercial undertakings;

(h) details of any agreed standards of *reliability* of *transmission service* or *distribution service* at the *connection point*s or within the *network*;

(i) testing intervals for *protection systems* associated with the *connection point*;

(j) agreed protocols for maintenance co-ordination;

(k) where an expected *load*, to be connected to a *network*, has a *peak load* requirement in excess 10 MW, the provision, installation, operation and maintenance of automatic *load* shedding facilities for 60 percent of the *load* at anytime; and

(l) terms and conditions of access to the *metering installation* for the *Metering Provider*.

The *connection agreements* may include other technical, commercial and legal conditions governing works required for the *connection* or *extension* to the *network* which the parties have negotiated and agreed to. The circumstances under which the terms of the *connection agreement* would require renegotiation may also be included.

Schedule 5.7 - Annual Forecast Information for Planning Purposes

This schedule sets out the information in respect of each *connection point* that must be provided to the relevant *Network Service Provider* by each *Registered Participant* that has a *connection point* to a *transmission network* of that *Network Service Provider*.

Data Description	Units	Time Scale	Data Category
At each *connection point* to a *transmission network*, a forecast of:			
Annual Maximum *Active power* - Winter	MW	years 1-10	Annual
Coincident *Reactive Power* - Winter	MVAr	years 1-10	Annual
Annual Maximum *Active power* - Summer	MW	years 1-10	Annual
Coincident *Reactive Power* - Summer	MVAr	years 1-10	Annual
Forecast *load* diversity between each *connection point* to the *network* (winter and summer)	%	years 1-5	Annual
Load Profiles:			
The following forecast daily *profile*s of *connection point* half-hourly average active and reactive *loads* are required, net of all *generating plant*:			
Day of the peak summer and winter MW *peak load* at *connection point*	MW and MVAr	years 1-5	Annual
Day of *network* peak summer and winter MW *load* (as specified)	MW and MVAr	years 1-5	Annual

Data Description	**Units**	**Time Scale**	**Data Category**
Each July, October, January, April under average conditions representing:			
(a)weekdays	MW and MVAr	years 1-5	Annual
(b)Saturdays	MW and MVAr	years 1-5	Annual
(c)Sundays/holidays	MW and MVAr	years 1-5	Annual
Day of the *network* minimum demand (as specified)	MW and MVAr	years 1-5	Annual
Undispatched *generation*:			
For each *connection point* to the *network* the following information is required:			
No. of g*enerating unit*s	No.	years 1-5	Annual
Capacity of each *generating unit*	MW (*sent out*)	years 1-5	Annual
Daily/Seasonal Operating characteristics	Text	years 1-5	Annual
Expected output at time of peak *network* Winter *load* (as specified)	MW	years 1-5	Annual
Expected output at time of peak *network* Summer *load* (as specified)	MW	years 1-5	Annual

CHAPTER 9

9. Jurisdictional Derogations and Transitional Arrangements

9.1 Purpose and Application

9.1.1 Purpose

(a) This Chapter contains the *jurisdictional derogations* that apply in relation to each *participating jurisdiction*.

(b) This Chapter prevails over all other Chapters of the *Rules*.

9.1.2 Jurisdictional Derogations

The *jurisdictional derogations* that apply in relation to each *participating jurisdiction* are set out in this Chapter as follows:

(a) Part A - Victoria;

(b) Part B - New South Wales;

(c) Part C - Australian Capital Territory;

(d) Part D - South Australia;

(e) Part E - Queensland; and

(f) Part F – Tasmania.

Part G sets out the Schedules to this Chapter 9.

Part A – Jurisdictional Derogations for Victoria

9.2 [Deleted]

9.3 Definitions

9.3.1 General Definitions

For the purposes of this Part A:

(1) a word or expression defined in the glossary in Chapter 10 has the meaning given to it in the glossary unless it is referred to in column 1 of the following table; and

(2) a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	Column 2
Counterparties	In relation to the *Smelter Agreements*, means Portland Smelter Services Pty Ltd, Alcoa of Australia Limited or any other party to one or more of the *Smelter Agreements* (other than *SEC*).
CPI	The Consumer Price Index: All Groups Index Number Melbourne compiled by the Australian Bureau of Statistics.
distribution licence	A *licence* to distribute and supply electricity.
Distributor	A person who holds a *distribution licence*.
EI Act	Electricity Industry Act 2000 (Vic).
EI (RP) Act	Electricity Industry (Residual Provisions) Act 1993 (Vic).
ESC	The Essential Services Commission established under section 7 of the *ESC Act*.
ESC Act	The Essential Services Commission Act 2001 (Vic).
Information requirements guidelines	The *submission guidelines* referred to in clause 6A.10.2.
licence	A licence within the meaning of the *EI Act* or deemed to be issued under the *EI Act* by operation of clause 5 of Schedule 4 to the *EI (RP) Act*.
maximum allowable aggregate revenue	The maximum allowable aggregate revenue for a *financial year* or *relevant regulatory period* (as the case may be) determined under clause 9.8.4C(d), as adjusted from time to time under clause 9.8.4C(g3) or (g4).
Quarter	The respective 3 monthly periods adopted by the Australian Bureau of Statistics for the compilation and issue of the CPI.

Column 1	Column 2
Regulated owner	An owner (whether *SPI PowerNet* or any other person) of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*: (a) who transmits electricity pursuant to a *transmission exemption* or *transmission licence;* (b) who is subject to the operation of the *Rules*; and (c) whose *aggregate annual revenue requirement* for *transmission services* is regulated under Chapter 6.
relevant regulatory period	A period comprising not less than 5 *financial years*.
SEC	State Electricity Commission of Victoria established under the State Electricity Commission Act 1958 (Vic).
shared network services	Services relating to the use of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network* provided by a *Regulated owner* to *VENCorp*, whether in accordance with a *transmission exemption* or *transmission licence* or under an agreement with *VENCorp*.
shared transmission network use charges	Charges for the locational and non-locational components of *prescribed TUOS services* and/or *prescribed common transmission services* and any other charges through which *VENCorp* is allowed, under Part J of Chapter 6A as modified by clause 9.8.4F, to recover any proportion of its *maximum allowable aggregate revenue*.
Smelter Agreements	Agreements, contracts and deeds referred to in Part A of schedule 3 to the *EI (RP) Act* in their form as at 1 July 1996 other than the Portland and Point Henry Flexible Tariff Deeds between *SEC* and the State Trust Corporation of Victoria.
Smelter Trader	*SEC* in its capacity as *Smelter Trader*.
SPI PowerNet	SPI PowerNet Pty Ltd (ACN 079 798 173), or any successor or assignee of any asset of SPI PowerNet used for the provision of *transmission services*.

Column 1	Column 2
statutory electricity transmission-related costs	In relation to *VENCorp*, the sum of the following costs for a *relevant regulatory period*: (1) *VENCorp's* aggregate actual costs in operating and planning the *Victorian Transmission Network*; (2) all *network* charges payable by *VENCorp* to *SPI PowerNet* or any other owner of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*, including charges relating to *augmentations*; (3) all other charges payable by *VENCorp* to providers of *network* support services and other services which *VENCorp* uses to provide *network services* that are *transmission services*; and (4) any other costs that directly arise out of *VENCorp's* functions under the *EI Act* relating to the transmission of electricity, the application of the *Rules* to *VENCorp* or the conditions imposed on *VENCorp* under its *transmission licence* relating to the transmission of electricity, for which there is no alternative method (legislative or contractual) for the recovery of those costs.
System Code	The code of that name sealed by the Office of the Regulator-General under the Office of the Regulator-General Act 1994 (Vic) on 3 October 1994 and saved and continued in operation by section 67 of the *ESC Act*.
Tariff Order	Has the same meaning as in the *EI Act*.
transmission exemption	An exemption granted under section 17 of the *EI Act* under which the person to whom it has been granted is exempted from the requirement to obtain a *licence* to transmit electricity.
transmission licence	A *licence* to transmit electricity.
VENCorp	Victorian Energy Networks Corporation established under Division 2A of Part 2 of the Gas Industry Act 1994 (Vic) and continued under Part 8 of the Gas Industry Act 2001 (Vic).
Victorian Distribution Network	In relation to a person that holds a *distribution licence*, the *distribution systems* in Victoria to which that *licence* relates and includes any part of those systems.
Victorian Minister	The Minister who, for the time being, administers the National Electricity (Victoria) Act 1997 (Vic).
Victorian Switching Operator	The person or persons who operate the Victorian Network Switching Centre.

Column 1	Column 2
Victorian Transmission Network	The *transmission systems* situated in whole or in part in Victoria in respect of which *VENCorp* (or any successor entity appointed by Victoria to carry out those functions) exercises the functions specified in clause 9.3.2(a)(1)(i) and part 1 of the table in clause 9.3.2, and includes any part of those *transmission systems*.
Wholesale Metering Code	The code of that name sealed by the Office of the Regulator-General under the Office of the Regulator-General Act 1994 (Vic) on 3 October 1994, as in force immediately before *market commencement*.

9.3.2 Network Service Provider

(a) For a provision of the *Rules* that refers to a *Network Service Provider*, in determining the *Network Service Provider* in relation to the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*, the following rules apply:

(1) subject to this clause and to anything to the contrary in the *Rules* or this Part A, the *Network Service Provider* is:

(i) *VENCorp*, if the provision relates to:

(A) the planning, development or *augmentation* of a *transmission network* or part of a *transmission network*; or

(B) the provision of *common services* or *network services* that are *transmission services* (other than *entry services* or *exit services*);

(ii) *SPI PowerNet* or any other owner of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*, if the provision relates to:

(A) the *connection* to, or modification of a *connection* to, a *transmission system*; or

(B) the provision of *connection services*;

(iii) *SPI PowerNet*, if the provision relates to any function of, or service provided by, the *Victorian Switching Operator* in respect of the *Victorian Transmission Network* or a part of the *Victorian Transmission Networ*k;

(2) in the case of each clause of the *Rules* referred to in part 1 of the following table, as modified by the description in that table, the *Network Service Provider* is *VENCorp*;

(3) in the case of each clause of the *Rules* referred to in part 2 of the following table, as modified by the description in that table, the *Network Service Provider* is *SPI PowerNet* or any other owner of the *Victorian Transmission Network* or part of the *Victorian Transmission Network*; and

(4) in the case of each clause of the *Rules* referred to in part 3 of the following table, as modified by the description in that table, the *Network Service Provider* is the *Victorian Switching Operator*.

Clause	Clause Description
Part 1 (*VENCorp*)	
3.13.3(d), (e), (f)(1), (f)(2), (g)(so far as it applies to clauses 3.13.3(f)(1) and (f)(2) and (i))	Standing data concerning expected network capability
4.5.1(b) and (c)	Determining the limits of the operation of the *power system* associated with *voltage* failure and translation of limits into key location operational settings or limits
4.7.1(a)	Submission of settings for *plant* required to maintain *power system* stability
5.2.3(b)	*Power system* performance and quality of *supply* standards of *transmission network*
5.2.3(d)(12), 5.6.2(n)	Reports about *network augmentation*
5.6.1	Forecasts for *connection points* to *transmission network*
5.6.2	Development of *networks* within a *region*
5.6.2A (except 5.6.2A(b)(2))	*Annual Planning Reports* for that part of the *transmission network* used for the provision of *common services* or *network services* that are *transmission services* (other than *entry services* or *exit services*)
5.6.6	Planning for the development, construction or *augmentation* of *new large transmission network assets* that are not *connection assets*
5.6.6A	Planning for the development, construction or *augmentation* of *new small transmission network assets* that are not *connection assets*

Clause	Clause Description
5.6.6B	Planning for the development, construction or *augmentation* of *funded augmentations* that are not *connection assets*
5.7.6	Tests of *generating units* requiring changes to normal operation
5.7.7 (except 5.7.7(e))	Inter-regional *power system* tests
Schedule 5.1, clause S5.1.2.3	*Power transfer capability* between *regions*
Schedule 5.3, clause S5.3.5	Power factor requirements of *loads*

Clause	Clause Description
Part 2 (*SPI PowerNet* or any other owner of the *Victorian Transmission Network* or part of the *Victorian Transmission Network*)	
4.6.5	Partial outage of power protection systems
4.11.1	Remote control and monitoring devices
4.11.2(a) and (d)	Provision and maintenance of communications facilities for control, operational metering and indications from local sites
5.2.3(e) and (e1) (except 5.2.3(e1)(2))	Management, maintenance, operation and restoration of *network*

Clause	Clause Description
Part 3 (*Victorian Switching Operator*)	
4.3.1(d)	High voltage switching procedures and arrangements
5.9.3	Involuntary disconnection
5.9.4	Disconnection to implement a court order
5.9.6	Obligation to reconnect
Schedule 5.1, clause S5.1.10.3(a)	Functional testing of *load shedding facilities*
Schedule 5.2, clause S5.2.3(8)	Switching and *isolation facilities*

(b) Notwithstanding anything in clause 9.3.2(a), the obligations of *VENCorp*, *SPI PowerNet* and any other owner of the *Victorian Transmission Network* or part of the *Victorian Transmission Network* under the *Rules* are several, and not joint nor joint and several.

(c) *VENCorp*:

(1) is a *Network Service Provider* in respect of the provisions of the *Rules* as set out in clause 9.3.2(a), even when *VENCorp* does not own, control or operate a *transmission system*; and

(2) is required to be registered by *NEMMCO* as a *Network Service Provider* under clause 2.5, even when *VENCorp* does not own, control or operate a *transmission system*.

(d) *VENCorp* must obtain the information from *SPI PowerNet* which *VENCorp* is required by clause 5.6.2A to publish in the *Annual Planning Report* in relation to *replacement transmission network assets*. *SPI PowerNet* must provide that information to *VENCorp* by 28 February in each year.

9.4 Transitional Arrangements for Chapter 2 - Registered Participants, Registration and Cross Border Networks

9.4.1 [Deleted]

9.4.2 Smelter Trader

(a) For the purposes of the *Rules*:

(1) *Smelter Trader* is deemed to be entitled to register as a *Customer* in respect of the *connection points* used to supply the electricity supplied under the *Smelter Agreements*;

(2) *Smelter Trader* is deemed to be registered as a *Customer* and as a *Market Customer* in relation to the electricity supplied under the *Smelter Agreements;*

(3) the electricity supplied under the *Smelter Agreements* is deemed to have been classified as a *market load* and the *connection points* used to supply that electricity are deemed to have been classified as *Smelter Trader's market connection points*;

(4) *Smelter Trader* is deemed to be the person that must register as the *Generator* in relation to the *generating systems* forming part of Anglesea Power Station;

(5) *Smelter Trader* is deemed to be registered as a *Generator* and a *Market Generator* in relation to the *generating systems* forming part of the Anglesea Power Station;

(6) *Smelter Trader* is only a *Market Generator* in respect of the *generating systems* forming part of the Anglesea Power Station to the extent to which the electricity generated by those *generating systems*

is available to the *Smelter Trader* for sale under the *Smelter Agreements*;

(7) none of the *Counterparties* is or is to be taken to be entitled to become a *Market Participant*, an *Intending Participant* or a *Customer* in respect of the electricity supplied under the *Smelter Agreements*;

(8) none of the *Counterparties* or any person that operates or controls the *generating systems* forming part of the Anglesea Power Station (other than *Smelter Trader*) is or is to be taken to be entitled to register as a *Generator* in relation to the *generating systems* forming part of the Anglesea Power Station; and

(9) each of the Counterparties and any person that owns, controls or operates the *generating systems* forming part of the Anglesea Power Station (other than *Smelter Trader*) is taken to have been exempted from the requirement to register as a *Generator* in relation to the *generating systems* forming part of the Anglesea Power Station.

(b) This clause 9.4.2 ceases to have effect upon the termination of the last of the *Smelter Agreements*.

9.4.3 Smelter Trader: compliance

(a) If complying with a requirement of the *Rules* (the "Rules Requirement") would result in the *Smelter Trader* being in breach of a provision of one or more of the *Smelter Agreements* (the "Contractual Requirement"), then the *Smelter Trader* is not required to comply with the Rules Requirement to the extent of the inconsistency between the Rules Requirement and the Contractual Requirement.

(b) If the *Smelter Trader* does not comply with a Rules Requirement in the circumstances described in clause 9.4.3(a), then the *Smelter Trader* must:

(1) give written notice to the *AER* of:

(i) the Rules Requirement which has not been complied with;

(ii) details of each act or omission which partly or wholly constitutes non-compliance with that Rules Requirement; and

(iii) details of each Contractual Requirement which is said by the *Smelter Trader* to be inconsistent with the Rules Requirement,

as soon as practicable and in any event within 30 *days* after the non-compliance with the Rules Requirement occurs or commences; and

(2) provide the *AER* with any documents or information in the possession or control of the *Smelter Trader* which evidence the matters referred

to in clause 9.4.3(b)(1) within 14 *days* (or any longer period agreed by the *AER*) of receiving a written request from the *AER*.

(c) If:

(1) the *Smelter Trader* requires the co-operation of a *Counterparty* to a *Smelter Agreement* to comply with a requirement of the *Rules*;

(2) the *Smelter Trader* has used reasonable endeavours to obtain the *Counterparty's* co-operation in order to enable the *Smelter Trader* to comply with that requirement; and

(3) under the *Smelter Agreements*, *SEC* has no ability to require the *Counterparty* to so co-operate with *SEC* and the *Counterparty* is not in breach of the *Smelter Agreements* by refusing to so co-operate with *SEC*,

then the *Smelter Trader* is not required to comply with that requirement.

(d) If the *Smelter Trader* does not comply with a requirement of the *Rules* in the circumstances described in clause 9.4.3(c), then the *Smelter Trader* must:

(1) give written notice to the *AER* of:

(i) the requirement of the *Rules* that has not been complied with;

(ii) details of each act or omission which partly or wholly constitutes non-compliance with that requirement of the *Rules*; and

(iii) details of the endeavours made by the *Smelter Trader* to obtain the co-operation of the *Counterparty* to enable the *Smelter Trader* to comply with the requirement of the *Rules*,

as soon as reasonably practical and in any event before the expiration of 30 *days* after the non-compliance with the requirement of the *Rules* occurs or commences; and

(2) provide the *AER* with any documents or information in the possession or control of the *Smelter Trader* which evidence the matters referred to in clause 9.4.3(d)(1) within 14 *days* (or any longer period agreed by the *AER*) of receiving a written request from the *AER*.

(e) To avoid any doubt, if:

(1) after reviewing any written notice provided by the *Smelter Trader* under clause 9.4.3(b)(1) and any additional documents or information provided by the *Smelter Trader* under clause 9.4.3(b)(2), the *AER* forms the view that compliance with the relevant Rules Requirement

would not have resulted in the *Smelter Trader* being in breach of the relevant Contractual Requirement; or

(2) after reviewing any written notice provided by the *Smelter Trader* under clause 9.4.3(d)(1) and any additional documents or information provided by the *Smelter Trader* under clause 9.4.3(d)(2), the *AER* forms the view that any of the requirements of clause 9.4.3(c) were not satisfied in respect of the subject of the notice,

then the matter may be dealt with by the *AER* as a breach of the *Rules.*

(f) The *Smelter Trader* must give any notice or other information required to be given under this clause 9.4.3 (called in this clause "required information") in advance if it becomes aware of the potential for the circumstances giving rise to its obligation to give the required information to arise. If any required information is given under this clause 9.4.3(f), then:

(1) the required information is taken to have been given in accordance with this clause 9.4.3; and

(2) notwithstanding clause 9.4.3(f)(1), notice must be given of the non-compliance and further information provided to the *AER* upon request under clause 9.4.3(b) or clause 9.4.3(d) (as the case may be) after the non-compliance occurs or commences.

(g) If non-compliance with the *Rules* is continuing, the notice of non-compliance with the *Rules* provided under clause 9.4.3(b) or clause 9.4.3(d) (as the case may be) will be effective in relation to that non-compliance until that non-compliance ends if the relevant notice specifies that the non-compliance is continuing. The *Smelter Trader* must notify the *AER* of the end of the non-compliance no later than 30 *days* after the non-compliance ends.

(h) Clauses 9.4.3(a) and 9.4.3(c) do not affect *SEC's* obligations with respect to registration with *NEMMCO* or making payments in respect of *Participant fees, prudential requirements* or *settlement amounts*.

9.4.4 Report from AER

Within 30 *days* of the end of each *Quarter*, the *AER* must prepare a report for the previous *Quarter* and make it available on request to all *Registered Participants* and to those *participating jurisdictions* that participated in the *market* during the *Quarter* covered by the report. The report must include:

(a) a summary of the acts or omission of the *Smelter Trader* constituting non-compliance with any requirement of the *Rules*, as disclosed in written notices received by the *AER* under clause 9.4.3 during the *Quarter* covered by the report; and

(b) an assessment by the *AER* of the effect that those acts or omissions have had on the efficient operation of the *market* during the *Quarter* covered by the report.

9.4.5 Cross Border Networks

(a) If:

(1) the *Victorian Minister* considers that a *transmission network* or *distribution network* situated in Victoria is a continuation of a *network* situated in another *participating jurisdiction* and should be considered to be part of the *network* of that other *participating jurisdiction*; and

(2) the *Minister* for that other *participating jurisdiction* consents,

then the *Victorian Minister* and the *Minister* for that other *participating jurisdiction* may nominate that the *network* is deemed to be entirely in that other *participating jurisdiction* and the *Rules* including any relevant *jurisdictional derogations* for the other *participating jurisdiction* are deemed to apply to the *network* as if the *network* were located entirely within that other *participating jurisdiction*.

(b) If a nomination is made under clause 9.4.5(a), then the *jurisdictional derogations* for Victoria do not apply to the extended part of the relevant *network* which is situated in Victoria.

(c) If the *Minister* of another *participating jurisdiction* nominates that the *jurisdictional derogations* for Victoria should apply to a *network* part of which is situated in that other *participating jurisdiction*, then if the *Victorian Minister* consents, the *jurisdictional derogations* for Victoria are also to apply to that part of the *network* situated in the other *participating jurisdiction.*

9.5 [Deleted]

9.6 Transitional Arrangements for Chapter 4 - System Security

9.6.1 Operating Procedures (clause 4.10.1)

(a) For the purposes of clause 4.10.1(b), the System Operating Procedures as defined in the *System Code* as at 13 December 1998 (with the necessary changes to be made by *VENCorp*) are the *regional specific power system operating procedures* that apply from that date in respect of the *Victorian Transmission Network.*

(b) This clause is not to be taken as limiting in any way the operation of any other provision of the *Rules* relating to the review, updating and amendment of the *regional specific power system operating procedures.*

9.6.2 Nomenclature Standards (clause 4.12)

For the purposes of clause 4.12, the Nomenclature Standards as defined in the *System Code* as at 13 December 1998 are taken to be the *nomenclature standards* agreed between a *Network Service Provider* in respect of the *Victorian Transmission Network* or a *Victorian Distribution Network* and *NEMMCO* until *NEMMCO* and the relevant *Network Service Provider* agree otherwise under clause 4.12(a) or *NEMMCO* determines otherwise under clause 4.12(a).

9.7 Transitional Arrangements for Chapter 5 - Network Connection

9.7.1 [Deleted]

9.7.2 Application for Connection

(a) This clause applies in respect of a *transmission network* (including a part of a *transmission network*) situated in Victoria in respect of which *VENCorp* and one or more other persons that hold a *transmission licence* is a *Network Service Provider*. In this clause, such a person (not *VENCorp*) is called a *"Connection Service Provider"*.

(b) The requirements of Chapter 5 in relation to access to, *connection* to, *augmentation* of, the modification of a *connection* to, the provision of *network services* or *transmission use of system services*, or a modification to the provision of *network services* or *transmission use of system services*, in respect of, a *transmission network* to which this clause applies are subject to this clause 9.7.2.

(c) If a *Connection Service Provider* receives a *connection* enquiry or an *application to connect* in respect of a *transmission network* to which this clause applies and the *connection* enquiry or *application to connect* relates in whole or part to the provision of *network services* or *transmission use of system services*, or a modification to the provision of *network services* or *transmission use of system services*, in respect of, a *transmission network* to which this clause applies, then the *Connection Service Provider* must give *VENCorp* the information provided by the person making the enquiry or the application under Chapter 5 in relation to the enquiry or application.

(d) For the purposes of determining under clause 5.3.2(e) whether *VENCorp* or a *Connection Service Provider* is the *Network Service Provider* that should process and respond to a *connection* enquiry and provide the information required under clauses 5.3.3(b)(3) and 5.3.3(b)(4) in response to a *connection* enquiry in relation to a *transmission network* to which this clause applies, regard must be had to the following:

(1) *VENCorp* is the *Network Service Provider* in respect of those aspects of the *application* that relate to the provision of *network services* or *transmission use of system services*; and

(2) the relevant *Connection Service Provider* is the *Network Service Provider* in respect of the provision of *connection services.*

(e) For the purposes of the following provisions of the *Rules*:

(1) responses to a *connection* enquiry under clause 5.3.3;

(2) provision of information about *connection* requirements under clause 5.3.4(b);

(3) an offer to *connect* under clauses 5.3.5 and 5.3.6;

(4) the terms of a *connection agreement* under clause 5.3.7; and

(5) the requirement to enter into a *connection agreement* under clause 5.3.7(a);

the *Network Service Provider* in respect of a *transmission network* to which this clause applies is:

(6) *VENCorp*, in respect of the provision of *network services* or *transmission use of system services*; and

(7) the relevant *Connection Service Provider*, in respect of the provision of *connection services*.

9.7.3 [Deleted]

9.7.4 Regulation of Distribution Network Connection

(a) In this clause:

appropriate regulator means:

(1) if there has been no transfer of regulatory responsibility to the *AER* under a law of Victoria – the *ESC*;

(2) if there has been a transfer of regulatory responsibility to the *AER* under a law of Victoria – the *AER*.

(b) This clause 9.7.4:

(1) applies in respect of the regulation of access to, *connection* to, the modification of a *connection* to, the *augmentation* of, the provision of *network services* or *distribution use of system services*, and the modification of the provision of *network services* or *distribution use of system services*, in respect of, a *distribution network* (including any part of a *distribution network*) situated in Victoria; and

(2) expires on the date fixed under the *National Electricity (Victoria) Act 2005* as the Victorian distribution pricing determination end date.

Note:

The date is 31 December 2010 or a later date fixed in a Victorian distribution pricing determination as the date on which the determination will cease to have effect.

(c) Notwithstanding anything to the contrary in the *Rules*, the appropriate regulator is responsible for the regulation of access to, *connection* to, the modification of a *connection* to, the *augmentation* of, the provision of *network services* and *distribution use of system services*, and the modification of the provision of *network services* and *distribution use of system services*, in respect of, any *distribution network* to which this clause applies.

(d) For the purposes of clause 5.3.6(c), any question as to the fairness and reasonableness of an offer to *connect* in relation to a *distribution network* to which this clause applies is to be decided by the appropriate regulator on the basis of the appropriate regulator's opinion of the fairness and reasonableness of the offer.

(e) If a dispute arises in relation to any of access to, *connection* to, the modification of a *connection* to, the *augmentation* of, the provision of *network services* or *distribution use of system services*, or the modification of the provision of *network services* or *distribution use of system services*, in respect of, any *distribution network* to which this clause applies, then that dispute must be resolved in accordance with procedures specified by the appropriate regulator and clause 8.2 does not apply to that dispute.

9.7.5 [Deleted]

9.7.6 [Deleted]

9.7.7 [Deleted]

9.8 Transitional Arrangements for Chapter 6 - Network Pricing

9.8.1 [Deleted]

9.8.2 [Deleted]

9.8.3 [Deleted]

9.8.4 Transmission Network Pricing

(a) Notwithstanding Chapter 6A, in determining *transmission service* pricing and revenues in respect of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*, the *AER* must:

(1) **[Deleted]**

(2) apply, as the case requires and subject to clauses 9.8.4A to 9.8.4F, Parts A – H of Chapter 6A; and

(3) ensure that each *Distributor* has the benefit or burden of an equalisation adjustment for each *financial year* equal to the amount of the adjustment specified for that *Distributor* in the column headed "Equalisation Adjustment" in the following table:

TABLE	
Business	**Equalisation Adjustment ($'000) Note 2)**
TXU Electricity Ltd	(4,939)
Powercor Australia Ltd	(19,011)
AGL Electricity Limited	5,171
CitiPower Pty Ltd	5,920
United Energy Ltd	12,859

multiplied by the relevant factor determined in accordance with the following table:

TABLE	
If the *financial year* falls within the period:	**then the relevant factor is:**
1 July 2001 - 30 June 2005	.80
1 July 2005 - 30 June 2010	.60
1 July 2010 - 30 June 2015	.40
1 July 2015 - 30 June 2020	.20
thereafter	0

(b) **[Deleted]**

9.8.4A Modification of Chapter 6A in its application to Victoria

The application of Chapter 6A in respect of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network* is subject to the modifications set out in clauses 9.8.4B to 9.8.4F.

9.8.4B Transmission service revenues

(a) Despite anything to the contrary in Chapter 6A or in this Chapter 9, the applicable *transmission* revenue regulatory regime for the regulation of *transmission service* revenues in respect of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network* is:

(1) in relation to any *transmission services* provided by a *Regulated owner*, the *transmission* revenue regulatory regime set out in Chapter 6A and, for that purpose, every reference in Chapter 6A to a *Transmission Network Service Provider* is to be read as a reference to a *Regulated owner*; and

(2) in relation to any *transmission services* provided by *VENCorp*, the *transmission* revenue regulatory regime set out in Chapter 6A as modified by clauses 9.8.4B to 9.8.4E, and for that purpose every reference in Chapter 6A to:

(i) a *Transmission Network Service Provider* is to be read as a reference to *VENCorp*;

(ii) the *maximum allowed revenue* for a *Transmission Network Service Provider* for a *regulatory year* of a *regulatory control period* is to be read as a reference to the *maximum allowable aggregate revenue*;

(iii) a *regulatory control period* is to be read as a reference to a *relevant regulatory period*; and

(iv) *prescribed transmission services* is to be read as a reference to services in respect of which *VENCorp* may determine *shared transmission network use charges*.

(b) In clause 9.8.4B(a)(1), *transmission services* includes *shared network services*.

9.8.4C Transmission revenue regulatory regime for transmission services provided by VENCorp

(a) The *transmission* revenue regulatory regime that applies to *VENCorp* must comply with the following principles:

(1) the amount of *VENCorp's maximum allowable aggregate revenue* for a *relevant regulatory period* must not exceed *VENCorp's statutory electricity transmission-related costs*; and

(2) *VENCorp's maximum allowable aggregate revenue* must be determined on a full cost recovery but no operating surplus basis.

(a1) For the avoidance of doubt, *transmission services* offered by *VenCorp* are not taken to be offered on a contestable basis by reason only of *VENCorp* having procured those services through a competitive tender or similar process.

(a2) The procedure set out paragraphs (b)-(g4) applies in relation to *transmission services* provided by *VenCorp* and Part E of Chapter 6A is modified in so far as it applies to the regulation of revenues.

(b) Not less than 7 months before the commencement of a *relevant regulatory period*, *VENCorp* must, for the purpose of enabling the *AER* to determine *VENCorp's maximum allowable aggregate revenue* for a *relevant regulatory period*, submit its revenue application for that *relevant regulatory period* to the *AER* that sets out:

(1) its proposed *maximum allowable aggregate revenue* for each *financial year* in that *relevant regulatory period*;

(2) its forecast *statutory electricity transmission-related costs* for each *financial year* in that *relevant regulatory period*; and

(3) **[Deleted]**

(4) a statement reconciling its most recent forecast of:

(i) the revenue that will be recovered by way of *shared transmission network use charges*; and

(ii) the *statutory electricity transmission-related costs*,

for the *relevant regulatory period* immediately preceding the *relevant regulatory period* to which the application relates.

(c) The application must be:

(1) consistent with the principles set out in clause 9.8.4C(a); and

(2) in a form that meets the *Information requirements guideline*s but only to the extent to which those guidelines are relevant and applicable to *VENCorp*.

(d) Subject to clause 9.8.4C(e), (f), (g), (g3) and (g4), the *AER* must determine *VENCorp's maximum allowable aggregate revenue* for a *relevant regulatory period*.

(e) A determination under clause 9.8.4C(d):

(1) must apply the principles set out in clause 9.8.4C(a);

(2) must comply with the requirements set out in clause 6A.14.2, modified as necessary to apply to the revenue regulatory regime under this clause 9.8.4C;

(3) must take into account:

(i) *VENCorp's* functions under the *EI Act*, the application of the *Rules* to *VENCorp* and the conditions imposed on *VENCorp* under its *transmission licence*; and

(ii) **[Deleted]**

(iii) the difference (if any) between the forecasts referred to in clause 9.8.4C(b)(4); and

(4) must set out the *maximum allowable aggregate revenue* for each *financial year* in that *relevant regulatory period*.

(f) If, after considering the application, the *AER* finds that there is a difference of the kind referred to in clause 9.8.4C(e)(3)(iii), the *AER* must apply that difference in any determination it makes under clause 9.8.4C(d).

(g) If the *AER* does not make a determination under clause 9.8.4C(d) before the commencement of the *relevant regulatory period* in respect of which the application was made, the *AER* is to be taken to have made a determination as to *VENCorp's maximum allowable aggregate revenue* in respect of each *financial year* in that *relevant regulatory period* on the same terms as the application.

(g1) If, at any time during a *relevant regulatory period*, a *Regulated owner* proposes to send a notice to the *AER* which could have the effect (directly or indirectly) of varying a charge, or introducing a new charge, payable by *VENCorp* to the *Regulated owner* during that *relevant regulatory period* for *shared network services*, the *Regulated owner* must first provide a copy of that notice to *VENCorp*.

(g2) If *VENCorp's statutory electricity transmission-related costs* for a *financial year* have exceeded, or *VENCorp* anticipates (as a result of receiving a notice from a *Regulated owner* under clause 9.8.4C(g1) or otherwise) that they will exceed, the amount of the *statutory electricity transmission-related costs* for that *financial year* assumed by the *AER* in making the determination of *VENCorp's maximum allowable aggregate revenue, VENCorp* may apply to the *AER* for an adjustment to the *maximum allowable aggregate revenue* for each affected *financial year* in the *relevant regulatory period* of an amount, set out in the application, equal to the amount required to ensure that the *maximum allowable aggregate revenue* complies with the principles in clause 9.8.4C(a).

(g3) Following an application by *VENCorp* under clause 9.8.4C(g2), the *AER* must determine the amount, if any, by which *VENCorp's maximum allowable aggregate revenue* for each affected *financial year* in the *relevant regulatory period* is to be adjusted so that it complies with the principles in clause 9.8.4C(a).

(g4) If the *AER* does not make a determination under clause 9.8.4C(g3) within 30 *business days* after the application by *VENCorp* under clause 9.8.4C(g2), the *AER* is to be taken to have made a determination that *VENCorp's maximum allowable aggregate revenue* for each affected *financial year* in the *relevant regulatory period* is to be adjusted by the amount set out in *VENCorp's* application.

(h) **[Deleted]**

9.8.4D Information disclosure by VENCorp

VENCorp must comply with Part F of Chapter 6A, but only to the extent to which it is relevant and applicable to *VENCorp.*

9.8.4E [Deleted]

9.8.4F Pricing for connection to and use of Victorian transmission network

(a) The operation of Part J of Chapter 6A, as it operates in respect the *Victorian Transmission Network* or a part of the *Victorian Transmission Network*, is modified by this clause 9.8.4F so that the allocation of the *aggregate annual revenue requirement* and its equivalent determined under clause 9.8.4C, and the allocation of transmission costs and the conversion of those allocated *transmission* costs to *prescribed transmission service* prices and charges as provided for under Part J of Chapter 6A, reflects the arrangements in place in relation to the *Victorian Transmission Network* or a part of the *Victorian Transmission Network* under the *EI Act*, the *ESC Act* and the *Tariff Order*.

(b) **[Deleted]**

(c) Part J of Chapter 6A applies in respect of the *Victorian Transmission Network* or a part of the *Victorian Transmission Network* in the following manner:

(1) references to *prescribed transmission services* are to be read (as applicable) as including *shared network services*;

(2) subject to clauses 9.8.4F(d), (f) and (h) (as the case requires), applies to:

(i) where a provision relates to the provision of *prescribed TUOS services* or *prescribed transmission common services*, a *Regulated owner* and *VENCorp* and, for that purpose, references in Part J to:

(A) a *Transmission Network Service Provider* are to be read as a reference to the *Regulated owner* or *VENCorp* (as the case requires); and

(B) *prescribed TUOS services* or *prescribed common transmission services* are to be read as, in the case of a *Regulated owner*, a reference to *shared network services*; and

(C) the *aggregate annual revenue requirement* are to be read as, in the case of *VENCorp*, a reference to the *maximum allowable aggregate revenue* for the relevant *financial year*;

(ii) where a provision of Part J of Chapter 6A relates to the provision of *prescribed entry services* or *prescribed exit services*, a *Regulated owner* and, for that purpose, every

reference in that provision to a *Transmission Network Service Provider* is to be read as a reference to the *Regulated owner*;

(3) rules 6A.27-6A.28 apply to:

(i) where a provision of any of these rules relates to the provision of *prescribed entry services* or *prescribed exit services*, a *Regulated owner* and, for that purpose, every reference in that provision to a *Transmission Network Service Provider* is to be read as a reference to the *Regulated owner*;

(ii) where a provision of any of these clauses relates to the provision of *prescribed TUOS services* or *prescribed common transmission services*, *VENCorp* and, for that purpose, every reference in that provision to a *Transmission Network Service Provider* is to be read as a reference to *VENCorp*.

(d) A *Regulated owner* must, on allocating its *aggregate annual revenue requirement* amongst all of its assets utilised in the provision of *shared network services*, immediately notify *VENCorp* of the actual amount of the *aggregate annual revenue requirement* allocated in respect of each of its assets utilised in the provision of those services.

(e) In addition to the modifications set out in clause 9.8.4F(c)(3), clause 6A.23.4 applies to a *Regulated owner* as if:

(1) there were substituted: "(3) *shared network services* cost" for the words in clause 6A.23.4(b)(3)-(5); and

(2) there were inserted in clause 6A.23.4, the following words:

"The portion of the *aggregate annual revenue requirement* referable to *shared network services* is recoverable by a *Regulated owner* from *VENCorp*."

(f) *VENCorp* is to be taken to be:

(1) the *Co-ordinating Network Service Provider* appointed under rule 6A.29 responsible for the allocation of all relevant *aggregate annual revenue requirements* relating to the provision of *transmission services* which are *transmission use of system services* or *common services* within the Victorian *region* in accordance with the relevant clauses of Part J of Chapter 6A; and

(2) the *Transmission Network Service Provider* referred to in clause 6A.29.2 which must liaise with *Network Service Providers* in other *interconnected regions* which are similarly responsible for the allocation of all relevant *aggregate annual revenue requirements*

relating to the provision of *transmission services* which are *transmission use of system services* or *common services*.

(g) **[Deleted]**

(h) *VENCorp* must, in allocating the portion of its *shared transmission network use charges* that is to be recovered from each *Distributor* to which it provides *prescribed TUOS services* and *prescribed transmission common services* in each *financial year* of a *relevant regulatory period*, adjust that portion in accordance with clause 9.8.4(a)(3).

9.8.4G Transitional provisions

Despite anything to the contrary in clauses 9.8.4A to 9.8.4D, any determination of the *ACCC* setting *VENCorp's revenue cap* that is in force immediately before 1 January 2003 is deemed to be a determination of the *AER* under clause 9.8.4C(d), and for that purpose, clauses 9.8.4A to 9.8.4D and the provisions of Part B of Chapter 6 as modified by clauses 9.8.4A to 9.8.4D, apply accordingly.

9.8.5 Distribution Network Pricing – Victorian Jurisdictional Regulator

(a) The *ESC* remains as the *Jurisdictional Regulator* for Victoria until a transfer of regulatory responsibility is made to the *AER* under a law of Victoria.

(b) This clause expires on 1 January 2011.

9.8.6 [Deleted]

9.8.7 Distribution network pricing – transitional application of former Chapter 6

(a) Subject to this clause, the former Chapter 6 continues to apply in relation to Victorian distribution networks during the transitional period.

(b) The appropriate regulator has the powers and functions of the *Jurisdictional Regulator* under the former Chapter 6 as if appointed for Victoria as the *Jurisdictional Regulator* for the purposes of clause 6.2.1(b) of the former Chapter 6.

(c) The following apply only to the extent they are consistent with clause 2.1 of the *Tariff Order*:

(1) national guidelines for *distribution service* pricing (so far as applicable to Victorian distribution networks) formulated under clause 6.2.1(c) of the former Chapter 6;

(2) guidelines and rules formulated for Victoria under clause 6.2.1(f) of the former Chapter 6,

(d) The arrangements outlined in Parts D and E of the former Chapter 6 must also be applied by the appropriate regulator subject to clause 2.1 of the *Tariff Order*.

(e) The value of sunk assets determined under clause 6.2.3(e)(5)(ii) of the former Chapter 6 must be consistent with clause 2.1 of the *Tariff Order*.

(f) In regulating *distribution service* pricing for a Victorian distribution network:

(1) the appropriate regulator must specify explicit price capping as the form of economic regulation to be applied in accordance with clause 6.2.5(b) of the former Chapter 6; and

(2) the appropriate regulator must comply with clause 2.1 of the *Tariff Order*.

(g) Neither this clause, nor the provisions of former Chapter 6 as continued in force by this clause, are relevant to a distribution determination that is to have effect after the end of the transitional period.

(h) In this clause:

appropriate regulator means:

(1) if there has been no transfer of regulatory responsibility to the *AER* under a law of Victoria – the *ESC*;

(2) if a transfer of regulatory responsibility has been made to the *AER* under a law of Victoria – the *AER*.

transitional period means the period commencing on the commencement of this clause and ending on its expiry.

Victorian distribution network means a *distribution network* situated wholly or partly in Victoria.

(i) This clause expires on the date fixed under the *National Electricity (Victoria) Act 2005* as the Victorian distribution pricing determination end date.

Note:

The date is 31 December 2010 or a later date fixed in a Victorian distribution pricing determination as the date on which the determination will cease to have effect.

9.8.8 Exclusion of AER's power to aggregate distribution systems and parts of distribution systems

The following provisions of Chapter 6 apply to *distribution systems* situated in Victoria as if, in each case, the words "unless the *AER* otherwise determines" were omitted:

(a) clause 6.2.4(c);

(b) clause 6.2.4(d);

(c) clause 6.8.2(e);

(d) clause 6.8.2(f).

Note:

The effect of these modifications is to exclude the AER's power to consolidate, under the ambit of a single distribution determination, 2 or more distribution systems, or 2 or more parts of a single distribution system that had, before the commencement of Chapter 6, been separately regulated.

9.9 Transitional Arrangements for Chapter 7 - Metering

9.9.1 Metering Installations To Which This Schedule Applies

The transitional arrangements set out in this clause 9.9 apply in relation to a *metering installation* (including a *check metering installation*) in use at *market commencement* that was required to comply with, and did comply with, the *Wholesale Metering Code* at *market commencement*.

9.9.2 [Deleted]

9.9.3 [Deleted]

9.9.4 [Deleted]

9.9.5 [Deleted]

9.9.6 [Deleted]

9.9.7 [Deleted]

9.9.8 [Deleted]

9.9.9 Periodic Energy Metering (clause 7.9.3)

(a) Subject to clause 9.9.9(b), for the purposes of clause 7.9.3, *NEMMCO*, the *Local Network Service Provider* and the *Market Participant* are taken to have agreed that the data referred to in clause 7.9.3 which is obtained from a *metering installation* to which this clause 9.9 applies may be collated in 15 minute intervals.

(b) This clause 9.9.9 ceases to apply in respect of a *metering installation* if *NEMMCO*, the relevant *Local Network Service Provider* or the relevant *Market Participant* gives notice requiring an agreement to be reached under clause 7.9.3.

9.9.10 Use of Alternate Technologies (clause 7.13)

(a) Subject to this clause 9.9.10, if at *market commencement* the *Wholesale Metering Code* provides for the use of alternate technologies or processes for the purpose of calculating the consumption of energy by a non-franchise customer (as defined in the *EI (RP) Act* and in force immediately before the commencement of section 39(a) of the Electricity Industry Act 1995 (Vic)), then the use of these technologies or processes is taken to have been agreed for the purposes of clause 7.13(a) but only to the extent to which the alternate technology or process was in use at *market commencement* in relation to that non-franchise customer.

(b) *NEMMCO*, the relevant *Local Network Service Provider* or the relevant *Market Participant* may give notice requiring agreement to be reached under clause 7.13(a) in respect of a technology or process referred to in clause 9.9.10(a) and clause 9.9.10(a) ceases to apply to that technology or process from the date specified in the notice.

9.9A [Deleted]

Schedule 9A1.1 – [Deleted]

Schedule 9A1.2 – [Deleted]

Schedule 9A1.3 – [Deleted]

Schedule 9A2 – [Deleted]

Schedule 9A3 – Jurisdictional Derogations Granted to Generators

1. Interpretation of tables

In this schedule 9A3:

(a) a reference to a *Generator* listed in a table is a reference to a *Generator* listed in column 1 of the relevant table;

(b) a reference to a *generating unit* listed in a table in relation to a *Generator* is a reference to each *generating unit* listed opposite the *Generator* in the relevant table;

(c) a reference to a *Network Service Provider* in relation to a *generating unit* or a *Generator* listed in a table is to be taken to be:

(1) in the case of a *generating unit connected* to a *transmission network*, a reference to *VENCorp*; and

(2) in the case of a *generating unit connected* to a *distribution network*, a reference to the person that is the *Network Service Provider* in relation to that *distribution network*; and

(d) a reference to a modification or variation of the *Rules* or an item taken to have been agreed for the purposes of the *Rules* listed in a table applies in respect of each *generating unit* listed opposite that modification, variation or agreed item in the table.

2. Continuing effect

In this schedule 9A3, a reference to:

(a) a particular *Generator* in relation to a *generating unit*; or

(b) a particular *Network Service Provider* in relation to a *Generator*,

at any time after the 13 December 1998 is to be taken as a reference to the person or persons who is or are (or who is or are deemed to be) from time to time registered with *NEMMCO* as the *Generator* in respect of that *generating unit* for the purposes of the *Rules* or the *Network Service Provider* from time to time in respect of the *transmission network* or *distribution network* to which the *generating unit* is *connected*.

3. Subsequent agreement

Where, under a provision of this schedule 9A3, a particular matter is taken to have been agreed for the purposes of schedule 5.2 of the *Rules* in relation to a *generating unit*, then that provision ceases to apply in respect of that *generating*

unit if all the parties required to reach agreement in relation to that matter under the *Rules* so agree expressly in writing.

4. Additional services that may be required (clause S5.2.2 of schedule 5.2)

4.1 A *Generator* listed in Table 1 is taken to have been required by the relevant *Network Service Provider* to provide *power system* stabilising *facilities* for the *generating units* listed in Table 1.

4.2 Clause 4.1 ceases to apply in respect of a *generating unit* if the relevant *Generator*, *NEMMCO* and the relevant *Network Service Provider* so agree expressly in writing.

Table 1:

Generator	Generating Units
Generation Victoria	Jeeralang Power Station A, Units 1 to 4
Generation Victoria	Jeeralang Power Station B, Units 1 to 3

5. Reactive Power Capability (clause S5.2.5.1 of schedule 5.2)

Clause S5.2.5.1 of schedule 5.2 of the *Rules* is replaced for a *Generator* listed in Table 2 in respect of those *generating units* listed in column 2 of Table 2 by the following:

For the purpose of this clause S5.2.5.1:

'*rated active power output*' means the 'Rated MW (Generated)' (as defined in the *Generating System Design Data Sheet*) for the relevant *synchronous generating unit*; and

'*nominal terminal voltage*' means the 'Nominal Terminal *Voltage*' (as defined in the *Generating System Design Data Sheet*) for the relevant *synchronous generating unit*.

(a) Each of the *synchronous generating units*, while operating at any level of *active power* output, must be capable of:

(1) supplying at its terminals an amount of *reactive power* of at least the amount that would be supplied if the *generating unit* operated at *rated active power output*, *nominal terminal voltage* and a lagging power factor of 0.9; and

(2) absorbing at its terminals an amount of *reactive power* of at least the amount that would be absorbed if the *generating unit* operated at *rated*

active power output, *nominal terminal voltage* and a leading power factor set out in respect of that *generating unit* in column 3 of Table 2.

(b) In the event that any of the relevant power factors referred to in paragraph (a) above cannot be provided in respect of a *generating unit*, the relevant *Generator* must reach a commercial arrangement under its *connection agreement* with the relevant *Network Service Provider*, or with another *Registered Participant*, for the supply of the deficit in *reactive power* as measured at that *generating unit's* terminals.

Table 2:

Generator	Generating Units	Leading Power Factor
Loy Yang Power Ltd	Loy Yang Power Station A Units 1, 3 and 4	0.944
Loy Yang Power Ltd	Loy Yang Power Station A Unit 2	0.952
Yallourn Power Ltd	Yallourn Power Station W Units 1 and 2	0.954
Yallourn Power Ltd	Yallourn Power Station W Units 3 and 4	0.941
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8	0.989
Smelter Trader	Anglesea Power Station Unit 1	0.991
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Unit 1	(-)
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 2, 3 and 4	(-)
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Unit 5	0.979
Generation Victoria	Jeeralang A Power Station Units 1 to 4	0.978
Southern Hydro Ltd	Dartmouth Power Station Unit 1	0.972
Edison Mission Energy	Loy Yang B Power Station	0.941

Australia Limited	Units 1 and 2	

6. Generating unit response to disturbances (clauses S5.2.5.3, S5.2.5.4 and S5.2.5.5 of schedule 5.2)

6.1 A *Generator* listed in Table 3.1 is, in respect of a *generating unit* listed in column 2 of Table 3.1, taken to comply with the requirements of clause S5.2.5.3, S5.2.5.4 and S5.2.5.5 of schedule 5.2 of the *Rules* if the *generating unit* complies with clause 6.3 below.

6.2 A *Generator* listed in Table 3.2 is, in respect of a *generating unit* listed in column 2 of Table 3.2, taken to comply with the requirements of clause S5.2.5.3, S5.2.5.4 and S5.2.5.5 of schedule 5.2 of the *Rules* if the *generating unit* complies with clause 6.4 below.

6.3 The *generating unit* must be able to maintain continuous uninterrupted operation in the event of:

(a) *disconnection* of the single largest *generating unit* on the *power system* provided that system *frequency* does not fall below 49.5 Hz and recovers to above 49.9 Hz within four minutes; and

(b) a two-phase to ground line fault adjacent to the power station switch yard cleared in primary protection time.

6.4 The *generating unit* must be able to maintain continuous uninterrupted operation in the event of *disconnection* of the single largest *generating unit* on the *power system* provided that system *frequency* does not fall below 49.5 Hz and recovers to above 49.9 Hz within four minutes.

Table 3.1:

Generator	Generating Units
Loy Yang Power Ltd	Loy Yang A Power Station Units 1 to 4
Generation Victoria	Newport D Power Station Unit 1

Table 3.2:

Generator	Generating Units
Yallourn Energy Ltd	Yallourn W Power Station Units 1 to 4
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 1 to 5

Generation Victoria	Jeeralang A Power Station Units 1 to 4
Generation Victoria	Jeeralang B Power Station Units 1 to 3
Southern Hydro Ltd	Dartmouth Power Station Unit 1 Eildon Power Station Units 1 and 2 Clover Power Station Units 1 and 2 McKay Creek Power Station Units 1 to 6 West Kiewa Power Station Units 1 to 4
Edison Mission Energy Australia Limited	Loy Yang B Power Station Units 1 and 2

7. Partial load rejection (clause S5.2.5.7 of schedule 5.2)

7.1 For a *Generator* listed in Table 4.1, in respect of those *generating units* listed in column 2 of Table 4.1, clause S5.2.5.7(c) of schedule 5.2 of the *Rules* is modified by the addition of the following after "*nameplate rating*":

"and system *frequency* remains within 47 Hz to 52 Hz provided that system *frequency* returns to:

(i) within the range 48.5 Hz to 50.5 Hz within 60 seconds; and

(ii) within the range 49.5 Hz to 50.5 Hz within 60 minutes,"

Table 4.1:

Power Station	Generating Units
Loy Yang Power Ltd	Loy Yang A Power Station Units 1 to 4
Generation Victoria	Newport D Power Station Unit 1
Yallourn Energy Ltd	Yallourn W Power Station Units 1 to 4
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 1 to 5
Generation Victoria	Jeeralang A Power Station Units 1 to 4 Jeeralang B Power Station Units 1 to 3

Edison Mission Energy Australia Limited	Loy Yang B Power Station Units 1 and 2

7.2 For a *Generator* listed in Table 4.2, the application of clause S5.2.5.4(a) of schedule 5.2 of the *Rules* to those *generating units* listed in column 2 of Table 4.2 is varied by replacing "30%" with "25%".

Table 4.2

Generator	Generating Units
Loy Yang Power Ltd	Loy Yang A Power Station Units 1 to 4
Yallourn Energy Ltd	Yallourn W Power Station Units 1 to 4
Hazelwood Power Corporation	Hazelwood Power Station Units 1 to 8
Energy Brix Australia Corporation	Morwell Power Station Units 1 to 5
Edison Mission Energy Australia Limited	Loy Yang B Power Station Units 1 and 2

7.3 For a *Generator* listed in Table 4.3, in respect of a *generating units* listed in column 2 of Table 4.3, clause S5.2.5.4(a) of schedule 5.2 of the *Rules* is modified by the addition of the following after "*nameplate rating"*: "and allowing that the *generating unit's* output may be manually adjusted to avoid rough running bands following automatic control action".

Table 4.3:

Generator	Generating Units
Southern Hydro Ltd	Dartmouth Power Station Unit 1 Eildon Power Station Units 1 and 2 Clover Power Station Units 1 and 2 West Kiewa Power Station Units 1 to 4

8. [Deleted]

9. [Deleted]

10. Protection systems that impact on system security (clause S5.2.5.9 of schedule 5.2)

For the purposes of clause S5.2.5.9 of schedule 5.2 of the *Rules*, in the case of a *Generator* listed in Table 7, in respect of those *generating units* listed in column 2 of Table 7:

(a) the relevant *Network Service Provider* is taken to have agreed that the *Generator* is to provide protections for those *generating units* to perform the following functions except where indicated otherwise in column 3 of Table 7:

(1) protection for faults on the line and connections to the unit transformer of the *generating unit* and *transmission network* or *distribution network* (as the case may be);

(2) protection for faults within the generator transformer of the *generating unit*;

(3) protection for faults within the *generating unit*;

(4) protection for excitation system faults;

(5) protection for faults in the phase isolated bus or its terminations between the *generating unit* and the generator transformer of the *generating unit*; and

(6) protection for faults within the generator transformer of the *generating unit*;

(b) where indicated in column 3 of Table 7, the protection system is not required to be duplicated; and

(c) the *Generator* must ensure that only settings approved by the relevant *Network Service Provider* in writing are applied on the *protection systems* of the *generating unit* and must not change any of those settings without the prior written approval of the relevant *Network Service Provider*.

Table 7:

Power Station	Generating Units	Derogations
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8	Not required to duplicate protections for excitation system faults.
Generation	Jeeralang A Power	Not required to duplicate protections

Victoria	Station Units 1 to 4	for faults in the unit transformers of the *generating unit*.
Generation Victoria	Jeeralang B Power Station Units 1 to 3	Not required to duplicate protection for excitation system faults or for faults in the unit transformers of the *generating unit*.
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 1 to 5	Not required to duplicate any protections. Not required to provide protection for faults within transformers (and connections thereto) which do not form part of the power station.

Power Station	Generating Units	Derogations
Southern Hydro Ltd	Eildon Power Station Units 1 and 2	Not required to duplicate protections for faults within the unit transformers of the *generating unit*.
Southern Hydro Ltd	Clover Power Station Units 1 and 2	Not required to duplicate any of the protections.

11. Asynchronous operation (clause S5.2.5.10 of schedule 5.2)

A *Generator* listed in Table 8 is not required to have protection to prevent pole slipping or asynchronous operation in respect of those *generating units* listed in column 2 of Table 8.

Table 8:

Generator	Generation units
Southern Hydro Ltd	Clover Power Station Units 1 and 2

12. [Deleted]

13. Governor Systems (load control) (clause S5.2.5.11 of schedule 5.2)

For the purposes of clause S5.2.5.11 of schedule 5.2 of the *Rules*, a *Generator* listed in Table 10 is not required to include *facilities* for *load* control for those *generating units* listed in column 2 of Table 10.

Table 10:

Generator	Generating Unit
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8
Smelter Trader	Anglesea Power Station Unit 1

14. Governor control equipment (clause S5.2.5.11 of schedule 5.2)

14.1 For the purposes of clause S5.2.5.11 of schedule 5.2 of the *Rules*, a *Generator* listed in Tables 11.1 to 11.4 is taken to have agreed the overall response requirements set out in clause 14.2 below with the relevant *Network Service Provider* in respect of those *generating units* listed in column 2 of Tables 11.1 to 11.4.

14.2 For a *Generator* listed in Tables 11.2 to 11.4, the overall response of a *generating unit* listed in the relevant Table to system *frequency* excursions must achieve an increase in the *generating unit's* generated output of 5% for a 0.1 Hz reduction in system *frequency* and a reduction in the *generating unit's* generated output of 5% for a 0.1 Hz increase in system *frequency*, subject to the following:

(a) for those *generating units* listed in Table 11.1, this clause only applies when operating in speed control mode;

(b) for those *generating units* listed in Table 11.2, the *generating unit* is only required to achieve a change in the *generating unit's* generated output in accordance with the requirements of British Standard BS EN 60045-1: 1993 with a droop setting of 4%;

(c) for those *generating units* listed in Table 11.3, the *generating unit* is only required to achieve a change in the *generating unit's* generated output in accordance with the requirements of the relevant British Standard for governors for hydro-electric generating units with an overall droop setting of 4% and a deadband of not more than 0.1 Hz; and

(d) for those *generating units* listed in Table 11.4, the requirements of this clause are subject to requirements for steam pressure control for briquette plant operation.

Table 11.1:

Generator	Generating Unit
Generation Victoria	Jeeralang A Power Station Units 1 to 4
Generation Victoria	Jeeralang B Power Station Units 1 to 3

Table 11.2:

Generator	Generating Unit
Yallourn Energy Ltd	Yallourn W Power Station Units 1 to 4
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 1 to 4

Table 11.3:

Generator	Generating Unit

Southern Hydro Ltd	Eildon Power Station Units 1 and 2 McKay Power Station Units 1 to 6 West Kiewa Power Stations Units 1 to 4
Southern Hydro Ltd	Clover Power Station Units 1 and 2

Table 11.4:

Generator	Generating Unit
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 2 to 4

15. Reactive current compensation (clause S5.2.5.13 schedule 5.2)

For the purposes of clause S5.2.5.13(b)(3)(x) of schedule 5.2 of the *Rules*, a *Generator* listed in Table 12 is taken to have agreed with the relevant *Network Service Provider* that in respect of those *generating units* listed in column 2 of Table 12, the *excitation control system* of the *generating unit* need not be capable of providing reactive current compensation settable for boost or droop.

Table 12:

Generator	Generating Units
Yallourn Power Ltd	Yallourn Power Station W Units 1 to 4

16. Excitation Control System (clause S5.2.5.13 of schedule 5.2)

For the purposes of clause S5.2.5.13(b) of schedule 5.2 of the *Rules*, a *Generator* listed in Table 13 is not required to provide *power system* stabilising action in relation to those *generating units* listed in column 2 of Table 13.

Table 13:

Power Station	Generating Units
Energy Brix Australia Corporation Pty Ltd	Morwell Power Station Units 1 to 5
Hazelwood Power Corporation Ltd	Hazelwood Power Station Units 1 to 8
Smelter Trader	Anglesea Power Station Unit 1

Part B – Jurisdictional Derogations for New South Wales

9.10 [Deleted]

9.11 Definitions

9.11.1 Definitions used in this Part B

For the purposes of this Part B:

(a) a word or expression defined in the glossary in Chapter 10 has the meaning given to it in the glossary unless it is referred to in column 1 of the following table; and

(b) a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	Column 2
EnergyAustralia	The energy distributor known as "EnergyAustralia" and established under the Energy Services Corporations Act 1995 (NSW).
ES Act	Electricity Supply Act 1995 (NSW).
IPART	The New South Wales Independent Pricing and Regulatory Tribunal established under the *IPART Act*.
IPART Act	Independent Pricing and Regulatory Tribunal Act 1992 (NSW).
Minister	The Minister administering the *ES Act* from time to time.
Mount Piper Cross Border Leases	The various agreements, documents and deeds relating to the leasing, ownership and operation of the *generating systems* comprising the *Mount Piper Power Station* entered into at the request of, or for the benefit of, one or more of Delta Electricity, New South Wales Treasury Corporation and the State of New South Wales and whether or not any of Delta Electricity, New South Wales Treasury Corporation or the State of New South Wales is a party to those agreements, documents and deeds.

Column 1	Column 2
Mount Piper Participants	The parties to the *Mount Piper Cross Border Leases* from time to time.
Mount Piper Power Station	The *power station* known as the "Mount Piper Power Station" located at Portland, New South Wales.
Mount Piper Trader	Delta Electricity or such other of the *Mount Piper Participants* from time to time which is operating the *Mount Piper Power Station*.
NSW Electricity Market Code	The code entitled NSW State Electricity Market Code, as in force immediately before 13 December 1998.
Power Supply Agreements	Each of the following agreements in their form as at 1 July 1996: (a) Power Supply Agreement dated 23 January 1991 between Macquarie Generation, Tomago Aluminium Company Pty Ltd and others; (b) the contract known as the **BHP Port Kembla Slab and Plate Products Contract** between Delta Electricity (formerly known as First State Power) and BHP Steel (AIS) Pty Ltd ACN 000 019 625 (formerly known as Australian Iron & Steel Ltd), being the contract that arises from the two agreements dated 24 May 1955, the agreement dated 27 November 1958 and the agreement dated 1 December 1969 (as amended and supplemented before 1 July 1996); (c) the contract known as the **BHP Newcastle Rod and Bar Products Contract** between Delta Electricity (formerly known as First State Power) and The Broken Hill Proprietary Company Ltd ACN 004 028 077, being the contract that arises from the agreement dated 13 August 1959 (as amended and supplemented before 1 July 1996).

Column 1	Column 2
Power Trader	Each of Delta Electricity (formerly known as First State Power), Macquarie Generation and such other person as may be nominated by the *Minister* to perform any obligation under a *Power Supply Agreement*.
TransGrid	The energy transmission operator known as "TransGrid" and established under the Energy Services Corporations Act 1995 (NSW).

9.12 Transitional Arrangements for Chapter 2 - Generators, Registered Participants, Registration and Cross Border Networks

9.12.1 Registration as a Generator

(a) For the purposes of the *Rules*:

(1) **[Deleted]**

(2) **[Deleted]**

(3) *Mount Piper Trader* is deemed to be the person that must register as a *Generator* in relation to the *generating systems* forming part of the *Mount Piper Power Station*; and

(4) the *Mount Piper Participants* (other than the *Mount Piper Trader*) are not to, and are not to be taken to be entitled to, and are taken to have been exempted from the requirement to, register as a *Generator* in relation to the *generating systems* forming part of *the Mount Piper Power Station*.

(b) **[Deleted]**

(c) Clause 9.12.1(a)(3) and (4) ceases to have effect upon the expiry or earlier termination of the last of the *Mount Piper Cross Border Leases.*

9.12.2 Customers

For the purposes of clause 2.3.1(e), and for the purposes of clause 2.4.2(b) in so far as it relates to *Customers*, a person satisfies the requirements of New South Wales for classification of a *connection point* of that person if that person is the holder of a retail supplier's licence issued under the *ES Act* or is a wholesale customer (as defined in the *ES Act*).

9.12.3 Power Traders

(a) Each *Power Trader* for the purpose of supplying electricity under a *Power Supply Agreement* (the "*Power Supply Agreement*") is deemed to be and at all relevant times to have been (and must register with *NEMMCO* as) a *Market Customer* in relation to electricity supplied under the *Power Supply Agreement*, which electricity is deemed to be and at all relevant times to have been a *market load*.

(b) If complying with a requirement of the *Rules* ("the Rules Requirement") would result in a *Power Trader* being in breach of a provision of a *Power Supply Agreement* to which it is a party ("the Contractual Requirement"), the *Power Trader* is not required to comply with the Rules Requirement to the extent of the inconsistency between the Rules Requirement and the Contractual Requirement.

(c) If a *Power Trader* does not comply with a Rules Requirement in the circumstances described in clause 9.12.3(b), then the *Power Trader* must:

(1) give written notice to the *AER* of:

(i) the Rules Requirement which has not been complied with;

(ii) details of each act or omission which partly or wholly constitutes non-compliance with that Rules Requirement; and

(iii) details of each Contractual Requirement which is said by the *Power Trader* to be inconsistent with the Rules Requirement,

by no later than 7 *days* after the non-compliance with the Rules Requirement occurs or commences; and

(2) provide the *AER* with any documents or information in the possession or control of the *Power Trader* which evidence the matters referred to in clause 9.12.3(c)(l), within 14 *days* (or any further period agreed to by the *AER*) of receiving a written request from the *AER*.

(d) If:

(1) a *Power Trader* requires the co-operation of any other party to a *Power Supply Agreement* (a "counterparty") to comply with a requirement of the *Rules* (the "Rules Requirement");

(2) the *Power Trader* has used all reasonable endeavours to obtain the counterparty's co-operation in order to enable the *Power Trader* to comply with the Rules Requirement; and

(3) under the *Power Supply Agreement* the *Power Trader* has no ability to require the counterparty to so co-operate with the *Power Trader* and the counterparty is not in breach of the *Power Supply Agreement* by refusing to so co-operate with the *Power Trader*,

then the *Power Trader* is not required to comply with that Rules Requirement.

(e) If a *Power Trader* does not comply with a Rules Requirement in the circumstances described in clause 9.12.3(d), then the *Power Trader* must:

(1) give written notice to the *AER* of:

(i) the Rules Requirement which has not been complied with;

(ii) details of each act or omission which partly or wholly constitutes non-compliance with that Rules Requirement; and

(iii) details of the endeavours made by the *Power Trader* to obtain the counterparty's co-operation to enable the *Power Trader* to comply with the Rules Requirement,

by no later than 7 *days* after the non-compliance with the Rules Requirement occurs or commences; and

(2) provide the *AER* with any documents or information in the possession or control of the *Power Trader* which evidence the matters referred to in clause 9.12.3(e)(1), within 14 *days* (or any further period agreed to by the *AER*) of receiving a written request from the *AER*.

(f) To avoid any doubt, if:

(1) after reviewing any written notice provided by a *Power Trader* under clause 9.12.3(c)(1) and any additional documents or information provided by the *Power Trader* under clause 9.12.3(c)(2), the *AER* forms the view that compliance with the relevant Rules Requirement would not have resulted in the *Power Trader* being in breach of the relevant Contractual Requirement; or

(2) after reviewing any written notice provided by a *Power Trader* under clause 9.12.3(e)(1) (the "Notice") and any additional documents or information provided by the *Power Trader* under clause 9.12.3(e)(2), the *AER* forms the view that any of the requirements of clause 9.12.3(d) were not in fact satisfied in respect of the subject matter of the Notice,

then the matter may be dealt with by the *AER* as a breach of the *Rules*.

(g) A *Power Trader* may provide notice and information to the *AER* as required in clauses 9.12.3(c) or (e), as the case requires, in advance if it becomes aware of the potential for the circumstances described in clauses 9.12.3(b) or (d) to arise. Such notice and information will be deemed to have been given in accordance with clauses 9.12.3(c) or (e), as the case requires.

(h) Notwithstanding the provision of notice and information in advance in accordance with clause 9.12.3(g), the *Power Trader* must give notice of non-compliance with the *Rules* and provide such other documents or information as required in accordance with clauses 9.12.3(c) or (e), as the case requires, after such non-compliance has occurred or commenced.

(i) If non-compliance with the *Rules* is continuing, the notice of non-compliance with the *Rules* provided under clauses 9.12.3(c) or (e), as the case requires, will be effective in relation to that non-compliance until that non-compliance ends provided that:

(1) the notice specifies that the non-compliance is continuing; and

(2) the *Power Trader* notifies the *AER* of the end of the non-compliance no later than 7 *days* after the non-compliance ends.

(j) Clauses 9.12.3(b) and (d) do not affect a *Power Trader's* obligation with respect to registration with *NEMMCO* or making payments in respect of:

(1) *Participant fees*;

(2) *prudential requirements*; or

(3) *settlement amounts*.

(k) Within 30 *days* of the end of each quarter in each calendar year, the *AER* must prepare a quarterly report for the previous quarter and make it available on request to all *Registered Participants* and to the *participating jurisdictions* which participated in the *market* during the quarter covered by the report. The quarterly report must include:

(1) a summary of the acts or omissions of *Power Traders* constituting non-compliance with any Rules Requirement, as disclosed in written notices received by the *AER* under clauses 9.12.3(c) or (e) during the quarter covered by the report; and

(2) an assessment by the *AER* of the effect that those acts or omissions have had on the efficient operation of the *market* during the quarter covered by the report.

(l) This clause 9.12.3 ceases to have effect in respect of a *Power Supply Agreement* upon termination of that agreement.

9.12.4 Cross Border Networks

(a) If:

(1) the *Minister* considers that a *transmission network* or *distribution network* situated in New South Wales is a continuation of a *network* situated in another *participating jurisdiction* and should be considered to be part of the *network* of that other *participating jurisdiction*; and

(2) the *Minister* for that other *participating jurisdiction* consents,

then those *Ministers* may nominate that the *network* is deemed to be entirely in that other *participating jurisdiction* and the *Rules* including any relevant *jurisdictional derogations* for the other *participating jurisdiction* are deemed to apply to the *network* as if the *network* were located entirely within that other *participating jurisdiction*.

(b) If a nomination is made under clause 9.12.4(a), then the *jurisdictional derogations* for New South Wales do not apply to the extended part of the relevant *network* which is situated in New South Wales.

(c) If the *Minister* of another *participating jurisdiction* nominates that the *jurisdictional derogations* for New South Wales should apply to a *network* part of which is situated in that other *participating jurisdiction*, then if the *Minister* in respect of New South Wales consents, the *jurisdictional derogations* for New South Wales are also to apply to that part of the *network* situated in the other *participating jurisdiction.*

9.13 [Deleted]

9.14 Transitional Arrangements for Chapter 4 - System Security

9.14.1 Power System Operating Procedures

For the purposes of clause 4.10.1, the *regional specific power system operating procedures* that apply in respect of operations on the *network* situated in New South Wales are, with the inclusion of any operating procedures set out in such operating manuals and other documents as are specified by *TransGrid* and provided to *NEMMCO*, the *regional specific power system operating procedures* reviewed and updated under clause 4.10.2(e).

9.15 Transitional Arrangements for Chapter 5 - Network Connection

9.15.1 [Deleted]

9.15.2 Disputes Relating to a NSW Distribution Network

(a) If:

(1) a dispute arises between or involving two or more *Registered Participants* in respect of:

(i) access to;

(ii) *connection* to;

(iii) use of; or

(iv) *distribution network service* pricing for,

a *distribution network* situated in New South Wales; and

(2) **[Deleted]**

(3) the dispute is not resolved by agreement of the parties in dispute within 10 *business days* (or such other period as the parties agree to be an acceptable period) after the dispute first arose,

then the matter in dispute must be referred by the parties in dispute to the appropriate regulator to act as the *Adviser*. If the appropriate regulator:

(4) thinks it appropriate for a dispute; and

(5) does not reasonably consider that acting as the *Adviser* and the *dispute resolution panel* will prejudice the appropriate regulator's ability to implement a fair and efficient dispute resolution process,

IPART may also act as the *dispute resolution panel* under the dispute resolution procedures set out in Chapter 8, provided that, if *IPART* elects to act as both the *Adviser* and the *DRP*, it must make such arrangements as are necessary to ensure that, in carrying out its functions as the *DRP*, no party may be adversely affected by *IPART* having previously acted as the *Adviser*. If *IPART* is unable or unwilling to make such arrangements, then it must appoint a *DRP* in accordance with the *Adviser*'s functions in Chapter 8.

(b) In this clause:

appropriate regulator means:

(1) if the NSW Minister has made no transfer of regulatory responsibility to the *AER* under clause 11.14.4 – *IPART*;

(2) if the NSW Minister has made a transfer of regulatory responsibility to the *AER* under clause 11.14.4 – the *AER*.

(c) This clause expires on 1 July 2009.

9.16 Transitional Arrangements for Chapter 6 - Network Pricing

9.16.1 [Deleted]

9.16.2 [Deleted]

9.16.3 Jurisdictional Regulator

(a) *IPART* remains as the *Jurisdictional Regulator* for New South Wales until the NSW Minister makes a transfer of regulatory responsibility to the *AER* under clause 11.14.4.

(b) However, the definitions of *local area* and *Local Network Service Provider* are to be read as if the reference to the authority responsible for administering the jurisdictional electricity legislation in the relevant participating jurisdiction were replaced by a reference to the laws of the State of New South Wales.

(c) Paragraph (a) expires on 1 July 2009.

9.16.4 Deemed Regulated Interconnector

For the purposes of the *Rules*, the *interconnector* between Armidale in New South Wales and Tarong in Queensland, to the extent that it forms part of the *power system* in New South Wales, is deemed to be a *regulated interconnector*.

9.16.5 Revenue Cap

(a) For the purposes of clause 6.2.4, in respect of the regulation of *transmission service* pricing in New South Wales, the *revenue cap* for the *financial year* commencing on 1 July 2004 (the "Period") will be deemed to be:

(1) for *TransGrid*, the *maximum allowed revenue* for the Period in the ACCC's "Draft Decision NSW and ACT Transmission Network Revenue Caps – TransGrid 2004/05-2008/09" dated 28 April 2004 (the "Draft TransGrid Revenue Cap Decision"); and

(2) for *EnergyAustralia*, the *maximum allowed revenue* for the Period in the ACCC's "Draft Decision NSW and ACT Transmission Network Revenue Cap – EnergyAustralia 2004/05-2008/09" dated 28 April 2004 (the "Draft EA Revenue Cap Decision").

(b) For the purposes of clauses 6.3 to 6.4, 6.5.1 to 6.5.6, 6.7.3, 6.7.4 and 6.8 to 6.9, the prices applying in the Period for *prescribed transmission services*

provided by means of the *transmission networks* and associated *connection assets* located in New South Wales applying to individual *transmission network connection points* located in New South Wales during the Period, must be determined on the following basis:

(1) the *aggregate annual revenue requirement* for *TransGrid* will be the *maximum allowed revenue* for the Period specified in the Draft TransGrid Revenue Cap Decision; and

(2) the *aggregate annual revenue requirement* for *EnergyAustralia* will be the *maximum allowed revenue* for the Period specified in the Draft EA Revenue Cap Decision.

(c) For the purposes of applying clause 6.4.3C for the *financial year* commencing on 1 July 2005, *EnergyAustralia* and *TransGrid* each must subtract the *maximum allowed revenue* determined in accordance with clause 9.16.5(a) from:

(1) in the case of *TransGrid*, the "Maximum Allowed Revenue" for the Period in any final decision which is expressed to apply to the Period; and

(2) in the case of *EnergyAustralia*, the "Maximum Allowed Revenue" for the Period in any final decision which is expressed to apply to the Period,

and then:

(3) if the result of that subtraction is an amount less than zero then, in addition to the other amounts mentioned in clause 6.4.3C(b), the absolute value of that amount must be deducted from the portion of the *aggregate annual revenue requirement* referred to in clause 6.4.3C(b); and

(4) if the result of that subtraction is an amount greater than zero then, in addition to the other amounts mentioned in clause 6.4.3C(c), that amount must be added to the portion of the *aggregate annual revenue requirement* referred to in clause 6.4.3C(c),

prior to the application of interest in accordance with clause 6.4.3C(b) or 6.4.3C(c) as the case may be.

(d) For the purposes of clause 6.2.4, in respect of the regulation of *transmission service* pricing in New South Wales, a *revenue cap* applying to a *Transmission Network Service Provider* determined by the ACCC for the period commencing on 1 July 2004 until the end of 30 June 2009 will be deemed to be for a period of five years notwithstanding that such *revenue*

cap did not take effect until after 1 July 2004 or that such *revenue cap* was determined by the *ACCC* after 1 July 2004.

9.17 Transitional Arrangements for Chapter 7 - Metering

9.17.1 Extent of Derogations

(a) **[Deleted]**

(b) **[Deleted]**

(c) The transitional arrangements set out in clauses 9.17.2 and 9.17.4 apply to all *metering installations* (including *check metering installations*) that were in use at 13 December 1998 and that were required to comply with (and did comply with) the *NSW Electricity Market Code* as at 13 December 1998.

9.17.2 Initial Registration (clause 7.1.2)

(a) Subject to clause 9.17.2(b), if:

(1) a *metering installation* to which this clause 9.17 applies was registered with *TransGrid* under the *NSW Electricity Market Code* as at 13 December 1998; and

(2) the details registered with *TransGrid* were provided to *NEMMCO* on or before 13 December 1998,

then the *metering installation* is taken to be registered with *NEMMCO* for the purposes of clause 7.1.2(a).

(b) The *responsible person* in respect of a *metering installation* which is taken to be registered under clause 9.17.2(a) must ensure that the requirements for registration of a *metering installation* under Chapter 7 are met by 13 December 1999 or such other time as may be agreed with *NEMMCO*.

9.17.3 Amendments to Schedule 9G1

The transitional metering provisions set out in schedule 9G1, amended as follows, apply to New South Wales in respect of Chapter 7:

(a) **[Deleted]**

(b) **[Deleted]**

(c) If, in respect of a *metering installation* commissioned before 13 December 1998, the *responsible person* has obtained an exemption prior to 13 December 1998 from *TransGrid* pursuant to clause 2.2(c) of Schedule 7.2 of the *NSW Electricity Market Code*, then that exemption is deemed to

continue as an exemption granted by *NEMMCO* pursuant to clause S7.2.2(c) of schedule 7.2 of the *Rules*.

(d) **[Deleted]**

(e) **[Deleted]**

(f) **[Deleted]**

9.17.4 Compliance with AS/NZ ISO 9002 (clause S7.4.3(f) of schedule 7.4)

Category 1A, 2A and 3A *Metering Providers* must be able to exhibit the requirements of clause S7.4.3(f)(1) of schedule 7.4 of the *Rules* by the date which is 2 years after the date the *Metering Provider* applied to be registered as a *Metering Provider* with *NEMMCO*.

9.17A [Deleted]

9.18 [Deleted]

Part C – Jurisdictional Derogations for the Australian Capital Territory

9.19 [Deleted]

9.20 Definitions and Transitional Arrangements for Cross-Border Networks

9.20.1 Definitions

For the purposes of this Part C:

(a) a word or expression defined in the glossary in Chapter 10 has the meaning given to it in the glossary unless it is referred to in column 1 of the following table; and

(b) a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	**Column 2**
Minister	The Minister from time to time administering the Utilities Act 2000 (ACT) or other applicable ACT legislation.

9.20.2 Cross Border Networks

(a) If:

(1) the *Minister* considers that a *transmission network* or *distribution network* situated in the Australian Capital Territory is a continuation of a *network* situated in New South Wales and should be considered to be a part of the New South Wales *network*; and

(2) the *Minister* for New South Wales consents,

then those *Ministers* may nominate that the *network* is deemed to be entirely in New South Wales and the *Rules* including any relevant *jurisdictional derogations* for New South Wales are deemed to apply to the *network* as if the *network* were located entirely within New South Wales.

(b) If a nomination is made under clause 9.20.2(a), then the *jurisdictional derogations* for the Australian Capital Territory do not apply to the extended part of the relevant *network* which is situated in the Australian Capital Territory.

(c) If the *Minister* for New South Wales nominates that the *jurisdictional derogations* for the Australian Capital Territory should apply to a *network* part of which is situated in New South Wales, then if the *Minister* for the Australian Capital Territory consents, the *jurisdictional derogations* for the Australian Capital Territory are also to apply to that part of the *network* situated in New South Wales.

9.21 [Deleted]

9.22 [Deleted]

9.23 Transitional Arrangements for Chapter 6 - Network Pricing

9.23.1 [Deleted]

9.23.2 [Deleted]

9.23.3 [Deleted

9.23.4 [Deleted]

9.24 Transitional Arrangements

9.24.1 Chapter 7 - Metering

The transitional metering provisions set out in schedule 9G1 apply to the Australian Capital Territory in respect of Chapter 7.

9.24.2 [Deleted]

9.24A [Deleted]

Part D – Jurisdictional Derogations for South Australia

9.25 Definitions

9.25.1 [Deleted]

9.25.2 Definitions

(a) For the purposes of this Part D, a word or expression defined in the glossary in Chapter 10 has the meaning given to it in the glossary unless it is referred to in column 1 of the table in clause 9.25.2(b).

(b) For the purposes of this Part D, a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	**Column 2**
customer	A customer as defined in the *Electricity Act*
Distribution Lessor Corporation	A subsidiary of the Treasurer of the State of South Australia established by the Public Corporations (Distribution Lessor Corporation) Regulations 1999 and known as "Distribution Lessor Corporation" and includes any entity which replaces or assumes rights or obligations of Distribution Lessor Corporation under a *South Australian Distribution Network Lease*, by way of succession, assignment, novation, ministerial direction, or otherwise.
Electricity Act	*Electricity Act* 1996 (SA).
ETSA Corporation	The statutory corporation established pursuant to the Electricity Corporations Act 1994 and known as "ETSA Corporation" and includes its successors and assigns
ETSA Power	The statutory corporation established as a subsidiary of *ETSA Corporation* by the Public Corporations (ETSA Power) Regulations 1995, and includes its successors and assigns.

Column 1	Column 2
ETSA Transmission Corporation	The statutory corporation established pursuant to the Electricity Corporations Act 1994 and known as "ETSA Transmission Corporation" and includes any party which replaces or assumes rights or obligations of ETSA Transmission Corporation as a party to the *South Australian Transmission Lease*, by way of succession, assignment, novation, ministerial direction, or otherwise.
Generation Lessor Corporation	A subsidiary of the Treasurer of the State of South Australia established by the Public Corporations (Generation Lessor Corporation) Regulations 1999 and known as "Generation Lessor Corporation" and includes any entity which replaces or assumes rights or obligations of Generation Lessor Corporation under the *South Australian Generation Leases*, by way of succession, assignment, novation, ministerial direction, or otherwise.
Northern Power Station agreements	The various agreements, documents and deeds in their form as at 1 July 1996 relating to the leasing and ownership of the *generating system* and associated *generating units* comprising the Northern Power Station entered into by *ETSA Corporation* and now under the control of *SA Generation Corporation*
Northern Power Station Participants	The parties to the *Northern Power Station agreements* other than *SA Generation Corporation.*
Osborne agreement	The Agreement dated 4 June 1996 (in its form as at 1 July 1996) between *ETSA Corporation* and Osborne Cogeneration Pty Ltd and known as the “Osborne Power Purchase Agreement”.
South Australian Distribution Network Lease	Any lease with respect to the electricity *distribution network*, plant and equipment owned by *Distribution Lessor Corporation* from time to time.
SA Generation Corporation	The statutory corporation established pursuant to the Electricity Corporations Act 1994 and known as “SA Generation Corporation” (trading as Optima Energy), and includes its successors and assigns
South Australian Generation Leases	Leases with respect to electricity *generating systems* and associated *generating units* owned by *Generation Lessor Corporation* from time to time.

Column 1	Column 2
South Australian network	A *network* situated in South Australia or deemed to be situated in South Australia by operation of clause 9.4.5.
South Australian Transmission Lease	The various agreements, documents and deeds in their form as at 31 August 1998 relating to the leasing and ownership of the *transmission network* in South Australia entered into by *ETSA Transmission Corporation.*
South Australian Transmission Lease Participants	The parties to the *South Australian Transmission Lease* other than *ETSA Transmission Corporation.*
South Australian Transmission Network Sub Sub Sub Lease	Any sub sub sub-lease (together with any lease or agreement to lease extending beyond the termination date of such sub sub sub lease) with respect to the electricity *transmission network*, plant and equipment of which *ETSA Transmission Corporation* is sub sub sub-lessor from time to time.

(c) **[Deleted]**

(d) For the purposes of the *Rules* "*applicable regulatory instruments*" includes the following South Australian instruments in relation only to the regulation of *networks, network services* and retail sales of electricity in South Australia:

(i) the *Electricity Act*;

(ii) all codes and regulations made and licences issued under the *Electricity Act*;

(iii) all regulatory instruments applicable under those licences;

(iv) the Electricity Pricing Order made under section 35B of the *Electricity Act*;

(v) the *Electricity Corporations (Restructuring and Disposal) Act* 1999;

(vi) the *Essential Services Commission Act* 2002; and

(vii) all regulations and determinations made under the *Essential Services Commission Act* 2002.

9.26 Transitional Arrangements for Chapter 2 - Registered Participants, Registration And Cross Border Networks

9.26.1 Registration as a Generator

For the purposes of the *Rules*:

(a) *ETSA Power* and any one person that replaces or assumes rights or obligations of *ETSA Power* as party to the *Osborne agreement*, by way of succession, assignment, novation, ministerial direction, or otherwise, is deemed to be, and at all relevant times to have been, the person who must register as the *Generator* in relation to the *generating system* and associated *generating units* which are the subject of the *Osborne agreement*;

(b) Osborne Cogeneration Pty Ltd is not to, and is not to be taken to be entitled to, and is to be taken to have been exempted from the requirement to, register as a *Generator* in relation to the *generating system* and associated *generating units* which are the subject of the *Osborne agreement*;

(c) *SA Generation Corporation* and any person that replaces or assumes rights or obligations of *SA Generation Corporation* as party to the *Northern Power Station agreements*, by way of succession, assignment, novation, ministerial direction, or otherwise, is deemed to be, and at all relevant times to have been, the person that must register as the *Generator* (unless otherwise exempt) in relation to the *generating system* and associated *generating units* which are the subject of the *Northern Power Station agreements*;

(d) the *Northern Power Station Participants* are not to, and are not to be taken to be entitled to, and are taken to have been exempted from the requirement to, register as a *Generator* in relation to the *generating system* and associated *generating units* which are the subject of the *Northern Power Station agreements*;

(e) clauses 9.26.1(a) and (b) will cease to have effect on the termination of *the Osborne agreement*;

(f) clauses 9.26.1(c) and (d) will cease to have effect on the termination of the last of the *Northern Power Station agreements*;

(g) *Generation Lessor Corporation* is not obliged to, and is not to be taken to be entitled to, and is to be taken to have been exempted from the requirement to, register as a *Generator* in relation to the *generating system* and associated *generating units* in South Australia which are the subject of the *South Australian Generation Leases*; and

(h) clause 9.26.1(g) will apply in respect of each *South Australian Generation Lease* from the time that lease becomes effective and will cease to have effect on the termination of that lease (or the termination of any renewal of that lease).

9.26.2 Registration as a Customer

For the purposes of clause 2.3.1(e), a person may classify its electricity purchased at a *connection point* in South Australia if the person is:

(a) licensed to retail electricity under the *Electricity Act* and regulations; or

(b) a *customer* pursuant to the *Electricity Act* and regulations.

9.26.3 Cross Border Networks

(a) If:

(1) the *Minister* considers that a *transmission network* or *distribution network* situated in South Australia is a continuation of a *network* situated in another *participating jurisdiction* and should be considered to be part of the *network* of that other *participating jurisdiction*; and

(2) the *Minister* for that other *participating jurisdiction* consents,

then those *Ministers* may nominate that the *network* is deemed to be entirely in that other *participating jurisdiction* and the *Rules* including any relevant *jurisdictional derogations* for the other *participating jurisdiction* are deemed to apply to the *network* as if the *network* were located entirely within that other *participating jurisdiction*.

(b) If a nomination is made under clause 9.26.3(a), then the *jurisdictional derogations* for South Australia do not apply to the extended part of the relevant *network* which is situated in South Australia.

(c) If the *Minister* of another *participating jurisdiction* nominates that the *jurisdictional derogations* for South Australia should apply to a *network* part of which is situated in that other *participating jurisdiction*, then if the *Minister* in respect of South Australia consents, the *jurisdictional derogations* for South Australia are also to apply to that part of the *network* situated in the other *participating jurisdiction*.

9.26.4 [Deleted]

9.26.5 Registration as a Network Service Provider

For the purpose of the *Rules*:

(a) the *South Australian Transmission Lease Participants* are not obliged to, and are taken to have been exempted from the requirement to, register as a *Network Service Provider* in relation to the *transmission network* in South Australia which is the subject of the *South Australian Transmission Lease*.

(b) Clause 9.26.5(a) will cease to have effect on the termination, extension or variation of the *South Australian Transmission Lease*.

(c) *Distribution Lessor Corporation* is not obliged to, and is not to be taken to be entitled to, and is to be taken to have been exempted from the requirement to, register as a *Network Service Provider* in relation to the *distribution network* in South Australia which is the subject of the *South Australian Distribution Network Lease*.

(d) *ETSA Transmission Corporation* (notwithstanding that it is the owner and sub sub sub lessor of the *transmission network* in South Australia) is not obliged to, and is not to be taken to be entitled to, and is to be taken to have been exempted from the requirement to, register as a *Network Service Provider* in relation to the *transmission network* in South Australia which is the subject of the *South Australian Transmission Network Sub Sub Sub Lease*.

(e) Clause 9.26.5(c) will have effect for the period of each *South Australian Distribution Network Lease* (including the period of any renewal).

(f) Clause 9.26.5(d) will have effect for the period of each *South Australian Transmission Network Sub Sub Sub Lease* (including the period of any renewal).

9.27 [Deleted]

9.28 Transitional Arrangements for Chapter 5 - Network Connection

9.28.1 Application of clause 5.2

For the purposes of clause 5.2:

(a) for *facilities* existing at *market commencement*, *Registered Participant* exemptions may be sought from *NEMMCO* in accordance with the *Rules* for particular *facilities* where material departures from the *Rules* are reasonably expected. Any necessity to alter the existing arrangements for *facilities* is to be negotiated and agreed by affected *Registered Participants*;

(b) South Australia reserves the right to seek further exemptions from *NEMMCO* in accordance with the *Rules* for existing *power stations* if they are unable to meet the requirements of the *Rules* and those exemptions will not result in system damage; and

(c) **[Deleted]**

(d) **[Deleted]**

(e) the provisions in this clause 9.28 apply until there are corresponding changes to the *Rules* which deliver equivalent outcomes to the satisfaction of the South Australian Government.

9.28.2 Regulation of Distribution Network Connection

(a) Notwithstanding anything to the contrary in the *Rules*, the *Jurisdictional Regulator* appointed for South Australia is responsible for the regulation of access in respect of any *distribution network* situated in South Australia concerning:

(i) *connection;*

(ii) modification of a *connection;*

(iii) *augmentation;*

(iv) provision of *network services* and *distribution use of system services;*

(v) modification of the provision of *network services* and *distribution use of system services.*

(b) For the purpose of clause 5.3.6(c), any question as to the fairness and reasonableness of an offer to *connect* in relation to a *distribution network* situated in South Australia is to be decided by the *Jurisdictional Regulator* on the basis of the opinion of the *Jurisdictional Regulator* as to the fairness and reasonableness of the offer.

(c) If:

(1) a dispute arises between or involving two or more *Registered Participants* in respect of:

(i) access to;

(ii) *connection* to;

(iii) use of; or

(iv) *distribution network service* pricing for,

a *distribution network* situated in South Australia; and

(2) the dispute is not resolved by agreement of the parties in dispute within 5 *business days* (or such other period as the parties agree to be an acceptable period) after the dispute first arose,

then the matter in dispute must be referred by the parties in dispute to the *Jurisdictional Regulator* to act as the *Adviser*. If the *Jurisdictional Regulator* thinks it appropriate, it may also act as the *dispute resolution panel* under the dispute resolution procedures set out in Chapter 8, provided that, if the *Jurisdictional Regulator* elects to act as both the *Adviser* and the *dispute resolution panel*, it must make such arrangements as are necessary to

ensure that, in carrying out its functions as the *dispute resolution panel*, no party may be adversely affected by the *Jurisdictional Regulator* having previously acted as the *Adviser*. If the *Jurisdictional Regulator* is unable or unwilling to make such arrangements, then it must appoint a *dispute resolution panel* in accordance with the *Adviser's* functions in Chapter 8.

(d) This clause expires on 1 July 2010.

9.28.3 System Planning

(a) In South Australia, the Electricity Supply Industry Planning Council ("*ESIPC*"), established under the *Electricity Act*, will be responsible for network planning as required by this clause 9.28.3.

(aa) The obligations of *Network Service Providers* with respect to *networks* in South Australia under clauses 5.6.2 and 5.6.2A are varied as follows:

(i) Except where expressly provided, nothing in this clause 9.28.3 relieves *Network Service Providers* operating in South Australia from their obligations under clause 5.6.

(ii) The results of planning activities undertaken by *Network Service Providers* pursuant to clause 5.6.2 must be communicated to the *ESIPC* in a manner, form and within a time reasonably determined by the *ESIPC*.

(iii) Relevant *Network Service Providers* must, as soon as possible, advise the *ESIPC* of the details of any *augmentation* plans arising under clause 5.6.2(c).

(iv) *Network Service Providers* must, as soon as possible, provide the *ESIPC* with the forecasts, technical limits and details of the proposed corrective actions that are developed in accordance with clause 5.6.2(e).

(v) The *ESIPC* must prepare the *Annual Planning Report* required under clause 5.6.2A for *networks* in South Australia. Relevant *Network*

Service Providers must prepare the information specified in clause 5.6.2A(b) and supply it to the *ESIPC* by April 30 each year, or by some later date as directed in writing by the *ESIPC*.

(ab) For the purposes of clause 5.6.3(b), *ESIPC* is the representative of South Australia on the *Inter-regional Planning Committee*.

(ac) An applicant who proposes to establish a *new large transmission network asset* under clause 5.6.6 must provide the *ESIPC* with a draft summary of the *application notice* 10 *business days* prior to providing a summary of the *application notice* to *NEMMCO*.

(b) The *ESIPC:*

(i) must be an incorporated body;

(ii) must register with *NEMMCO* as a *Network Service Provider* under the *Rules*; and

(iii) as a registered *Network Service Provider*, must comply with the relevant obligations of a *Network Service Provider*, but does not have to comply with the obligations of clauses 2.11.2 and 5.6.2(e)-(m).

(c) [**Deleted**]

9.29 Transitional Arrangements for Chapter 6 - Economic Regulation of Distribution Services

9.29.1 Jurisdictional Regulator

(a) The South Australian *Essential Services Commission* remains as the *Jurisdictional Regulator* for South Australia until the SA Minister makes a transfer of regulatory responsibility to the *AER* under clause 11.14.4.

(b) This clause expires on 1 July 2010.

9.29.2 [Deleted]

9.29.3 [Deleted]

9.29.4 [Deleted]

9.29.5 Distribution Network Pricing – South Australia

(a) In this clause:

price determination means Part B of the 2005–2010 Electricity Distribution Price Determination made under the *Essential Services Commission Act 2002* (SA).

SA Distributor means the *Distribution Network Service Provider* whose *distribution network* is situated in South Australia.

relevant distribution determination means the distribution determination for the *SA Distributor* for the *regulatory control period* that commences in 2010.

small customer has the same meaning as in the *Electricity Act 1996* (SA).

statement of regulatory intent means the *statement of regulatory intent* in regard to the electricity distribution efficiency carryover mechanism issued by the Essential Services Commission on 23 March 2007 under clause 7.4 of the Electricity Pricing Order made by the Treasurer under section 35B of the *Electricity Act 1996* (SA) on 11 October 1999.

(b) The relevant distribution determination:

(1) must incorporate appropriate transitional arrangements to take into account the change from a pre-tax to a *post-tax revenue model* (which must be consistent with any agreement between the *AER* and the *SA Distributor* about the arrangements necessary to deal with the transition); and

(2) must allow the *SA Distributor* to carry forward impacts associated with the calculation of Maximum Average Distribution Revenue under the price determination into the 2010/11 and 2011/12 *regulatory years*.

(c) The *efficiency benefit sharing scheme* under the relevant distribution determination must be consistent with the *statement of regulatory intent*.

(d) The following side constraint is to be applied to tariffs for small customers for the *regulatory control period* to which the relevant distribution determination applies:

The fixed supply charge component of the tariff must not increase by more then $10 from one *regulatory year* to the next.

(e) In preparing its *framework and approach paper* for the distribution determination that is to follow the relevant distribution determination, the *AER* must consider whether the above side constraint should continue with or without modification.

(f) Any reduction in *transmission network* charges as a result of a regulatory reset (excluding reductions resulting from the distribution of *settlements*

residue and *settlements residue auction* proceeds) must be paid to all *customers*.

9.29.6 Capital contributions, prepayments and financial guarantees

(a) The amount that a South Australian *Distribution Network Service Provider* may receive by way of capital contribution, prepayment and/or financial guarantee in respect of a *South Australian network* will be determined by the appropriate regulator in accordance with *applicable regulatory instruments*.

(b) This clause operates to the exclusion of clause 6.7.2(b) of the former Chapter 6 (as it continues in force under transitional provisions) and clause 6.21.2(2) of the present Chapter 6.

(c) In this clause:

appropriate regulator means:

(1) if the South Australian Minister has made no transfer of regulatory responsibility to the *AER* under clause 11.14.4 – the South Australian *Essential Services Commission*;

(2) if the South Australian Minister has made a transfer of regulatory responsibility to the *AER* under clause 11.14.4 – the *AER*.

9.29.7 Ring fencing

On the *AER*'s assumption of responsibility for the economic regulation of *distribution services* in *South Australia, the guidelines entitled Operational Ring-fencing Requirements for the SA Electricity Supply Industry: Electricity Industry Guideline No. 9* dated June 2003 (including amendments and substitutions made up to the date the *AER* assumes that responsibility) will be taken to be distribution ring-fencing guidelines issued by the *AER* under Rule 6.17.

9.29A Monitoring and reporting

(a) *NEMMCO* must provide to the *ESIPC* upon request:

(i) any information that relates to *interconnectors* into South Australia; and

(ii) South Australian market data,

where such information is within *NEMMCO's* control and it is reasonably required to support the performance of the role of jurisdictional Responsible Officer by an officer or employee of the *ESIPC* under the National

Electricity Market Memorandum of Understanding on the Use of Emergency Powers and the regulations under the *Electricity Act*.

(b) The information referred to in clause 9.29A(a) must be provided by *NEMMCO* via a real time data link or, where that is not available, within a reasonable time.

(c) Where the cost incurred by *NEMMCO* in providing the information referred to in clause 9.29A(a) exceeds the usual costs which *NEMMCO* incurs in providing any *Market Participant* with information in accordance with the *Rules*, the *ESIPC* must pay the additional costs.

9.30 Transitional Provisions

9.30.1 Chapter 7 - Metering

(1) The transitional metering provisions set out in schedule 9G1 apply to South Australia in respect of Chapter 7.

(2) [**Deleted**]

(3) [**Deleted**]

(4) [**Deleted**]

(5) **[Deleted]**

9.30.2 [Deleted]

Schedule 9D1 - [Deleted]

Part E – Jurisdictional Derogations for Queensland

9.31 [Deleted]

9.32 Definitions and Interpretation

9.32.1 Definitions

(a) For the purposes of this Part E:

(1) a word or expression defined in the glossary in Chapter 10 has the meaning given to it in the glossary unless it is referred to in column 1 of the following table; and

(2) a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	Column 2
connection agreement	Includes all "Connection and Access Agreements" established in Queensland prior to *market commencement.*.
Contestable Customer	A customer prescribed by a regulation made under the *Electricity Act* as a contestable customer.
Electricity Act	The Electricity Act 1994 (Qld).
exempted generation agreement	An agreement between a *State Electricity Entity* and the owner or operator of a *generating system*, as listed at schedule 9E1, and any amendment of such agreement made prior to 13 December 1998 or, if made in accordance with clause 9.34.6(s), thereafter.
GOC Act	The Government Owned Corporations Act 1993 (Qld).
Minister	The Minister administering the *Electricity Act* from time to time.
Nominated Generator	A *State Electricity Entity* determined by the *Minister* for the purposes described in clause 9.34.6 for a *generating system* to which an *exempted generation agreement* applies.
Powerlink Queensland	Queensland Electricity Transmission Corporation Ltd, a corporation established under the *GOC Act.*

Column 1	Column 2
Queensland Competition Authority	The Queensland Competition Authority established under the *Queensland Competition Authority Act*.
Queensland Competition Authority Act	The Queensland Competition Authority Act 1997 (Qld).
Queensland distribution network	A *distribution network* (including any part of a *distribution network*) situated in Queensland.
Queensland Grid Code	The Code of that name first issued by the Department of Mines and Energy (Qld) on 28 November 1994, as amended from time to time.
Queensland system	The sum of the *transmission network* located in Queensland operating at a nominal *voltage* of 275 kV, the *connection assets* associated with that *network* and any *transmission or distribution system connected* to that *network* and also located in Queensland.
Queensland transmission network	A *transmission network* (including any part of a *transmission network*) situated in Queensland.
retail authority	An authority of that name issued under the *Electricity Act.*
Retail Entity	A retail entity as defined in the *Electricity Act.*
Small Generator	A *Generator* whose *generating system* is *connected* to the *Queensland system* and has a *nameplate rating* of less than 5MW.
special approval	An approval of that name issued under the *Electricity Act.*
Stanwell Corporation Ltd	A corporation established under the *GOC Act.*
Stanwell Cross Border Leases	The various agreements, documents and deeds relating to the leasing, ownership and operation of the *generating systems* comprising the *Stanwell Power Station* entered into, or to be entered into, at the request of, or for the benefit of, one or more of *Stanwell Corporation Ltd* and the State of Queensland and whether or not any of *Stanwell Corporation Ltd* or the State of Queensland is a party to those agreements, documents and deeds.
Stanwell Power Station	The *power station* known as the "Stanwell Power Station" located at Stanwell, Queensland.

Column 1	Column 2
State Electricity Entity	A State electricity entity as defined in the *Electricity Act.*
transmission authority	An authority of that name issued under the *Electricity Act.*

(b) For the purposes of the *Rules*, to the extent that any *network* is located in Queensland, a *network* or part of a *network* is a *transmission network* if and only if it satisfies the following definition of "*transmission network*" and the definition of "*transmission network*" given in the glossary in Chapter 10 does not apply in those circumstances:

transmission network	Despite clause 6A.1.5(b) and the glossary of the *Rules*, in Queensland the *transmission network* assets are to be taken to include only those assets owned by *Powerlink Queensland* or any other *Transmission Network Service Provider* that holds a *transmission authority* irrespective of the *voltage* level and does not include any assets owned by a *Distribution Network Service Provider* whether or not such *distribution* assets are operated in parallel with the *transmission system*.

9.32.2 Interpretation

In this Part E, a reference to any authority, corporation or body whether statutory or otherwise, in the event of that authority, corporation or body ceasing to exist or being reconstituted, renamed or replaced or its powers, duties or functions being transferred to or assumed by any other authority, corporation or body, will, as the case requires, be taken to refer to the authority, corporation or body replacing it or the authority, corporation or body, succeeding to or assuming the powers, duties or functions of it.

9.33 Transitional Arrangements for Chapter 1

9.33.1 [Deleted]

9.34 Transitional Arrangements for Chapter 2 - Registered Participants and Registration

9.34.1 Application of the Rules in Queensland (clauses 2.2 and 2.5)

Any person who engages in the activity of owning, controlling or operating:

(a) a *generating system* that *supplies* electricity to a *transmission or distribution system* of a kind referred to in clause 9.34.1(b); or

(b) a *transmission or distribution system* in Queensland which does not form part of the *national grid*,

is not to, and is not to be taken to be entitled to, and is taken to have been exempted from the requirement to, register as a *Registered Participant* in relation to that activity.

9.34.2 Stanwell Cross Border Leases (clause 2.2)

(a) *Stanwell Corporation Ltd* is deemed to be the person that must register as a *Generator* in relation to the *generating systems* which are the subject of the *Stanwell Cross Border Leases*.

(b) The parties (other than *Stanwell Corporation Ltd*) to the *Stanwell Cross Border Leases* are not to be and are not to be entitled to, and are taken to have been exempted from the requirement to, register as a *Generator* in relation to the *generating systems* which are the subject of the *Stanwell Cross Border Leases*.

(c) Clauses 9.34.2(a) and (b) cease to have effect upon the expiry or earlier termination of the last of the *Stanwell Cross Border Leases*.

9.34.3 [Deleted]

9.34.4 Registration as a Customer (clause 2.3.1)

(a) **[Deleted]**

(b) Subject to clause 9.34.4(c), for the purpose of clause 2.3.1(e), a person satisfies the requirements of Queensland for classification of a *connection point* if that person is:

(1) a *Contestable Customer* in relation to that *connection point*; or

(2) a *Retail Entity* who is:

(i) authorised by a *retail authority* to sell electricity to the person *connected* at that *connection point;* or

(ii) the *Local Retailer* for the *local area* in which the *connection point* is located; or

(iii) the holder of a *special approval* which authorises the person to:

(A) purchase electricity in the *market* in respect of that *connection point*; or

(B) sell electricity to the person *connected* at that *connection point*; or

(iv) a person exempted under the *Electricity Act* from the operation of section 89(1) of the *Electricity Act* in relation to the sale of electricity to the person *connected* at that *connection point*.

(c) For the purpose of clause 2.3.1(e), a person does not satisfy the requirements of Queensland for classification of its electricity purchased at a *connection point* in Queensland if the electricity is supplied through a *transmission or distribution system* which does not form part of the *national grid*.

(d) **[Deleted]**

9.34.5 There is no clause 9.34.5

9.34.6 Exempted generation agreements (clause 2.2)

(a) For the purpose of supplying electricity under any *exempted generation agreement*, for each *generating system* which forms part of one of the *power stations* listed in schedule 9E1 the Minister may determine, in consultation in each case with the owner of the relevant *generating system*, whether a *State Electricity Entity* (the "*Nominated Generator*"), rather than another person engaging in the activity of owning, operating or controlling the *generating system*, should be the *Generator* in respect of the *generating system*.

(b) For the purposes of the *Rules* if the *Minister* has determined a *Nominated Generator* for any *generating system* as described in clause 9.34.6(a):

(1) the *Nominated Generator* is taken to be, and at all relevant times to have been, and is the person that must register as, a *Generator* in relation to that *generating system*; and

(2) any person engaging in the activity of owning, controlling or operating that *generating system*, not being the *Nominated Generator*, is not to, is not entitled to, and is taken to have been exempted from the requirement to, register as a *Generator* in relation to that *generating system*.

(c) If complying with a requirement of the *Rules* ("the *Rules Requirement*") would result in a *Nominated Generator* being in breach of a provision of an *exempted generation agreement* to which it is a party (the "*contractual requirement*"), the *Nominated Generator* is not required to comply with the *Rules requirement* to the extent of the inconsistency between the *Rules requirement* and the *contractual requirement* provided that this

clause 9.34.6(c) must not be interpreted to relieve a *Nominated Generator* of the obligation to submit offers in respect of a *scheduled generating unit* or to operate the *generating unit* in accordance with *dispatch instructions* determined under Chapter 3.

(d) If:

(1) a *Nominated Generator* requires the co-operation of one or more of the parties to an *exempted generation agreement* (a "*counterparty*") in order to enable the *Nominated Generator* to comply with the *Rules requirement*;

(2) the *Nominated Generator* has used its reasonable endeavours to obtain the *counterparty's* co-operation in order to enable the *Nominated Generator* to comply with the *Rules requirement*; and

(3) the *Nominated Generator* has no ability to require the *counterparty* to so co-operate with the *Nominated Generator* and the *counterparty* is not in breach of the *exempted generation agreement* by refusing to so co-operate,

then the *Nominated Generator* is not required to comply with the *Rules requirement*.

(e) If a *Nominated Generator* does not comply with a *Rules requirement* in the circumstances set out in clause 9.34.6(c) or (d), the *Nominated Generator* must:

(1) give notice to the *AER* as soon as practicable, and in any event before the expiration of 7 *days* after the non-compliance with the *Rules requirement* occurs or commences, of:

(a) details of the *Rules requirement* which has not been or will not be complied with;

(b) details of each act or omission which partly or wholly constitutes non-compliance with that *Rules requirement*;

(c) in the case of circumstances described in clause 9.34.6(c), unless explicitly prohibited by the terms of the relevant *exempted generation agreement*, details of each *contractual requirement* which is considered by the *Nominated Generator* to be inconsistent with the *Rules requirement*; and

(d) in the case of circumstances described in clause 9.34.6(d), details of the endeavours made by the *Nominated Generator* to obtain the *counterparty's* co-operation to enable the *Nominated Generator* to comply with the *Rules requirement*; and

(2) unless explicitly prohibited by the terms of the relevant *exempted generation agreement*, give the *AER* any documents or information in the possession or control of the *Nominated Generator* which evidence the matters referred to in clause 9.34.6(e)(1) within 14 *days* (or any further period agreed to by the *AER*) of receiving a written request from the *AER*.

(f) To avoid any doubt, if after reviewing a notice and any documents or information given by the *Nominated Generator* under clause 9.34.6(e), the *AER* forms the view that:

(1) in the case of circumstances described in clause 9.34.6(c), compliance with the *Rules requirement* would not have resulted in the *Nominated Generator* being in breach of the relevant *contractual requirement*; or

(2) in the case of circumstances described in clause 9.34.6(d), any of the requirements of clause 9.34.6(d) were not in fact satisfied,

then the matter may be dealt with by the *AER* as a breach of the *Rules*.

(g) **[Deleted]**

(h) A *Nominated Generator* may give notice and information to the *AER* as required in clause 9.34.6(e) in advance if it becomes aware of the potential for the circumstances described in clause 9.34.6(c) or 9.34.6(d) to arise, and the giving of that notice and information will be taken to satisfy the requirements of the *Nominated Generator* in clause 9.34.6(e)(1) in respect of those circumstances.

(i) Notwithstanding the provision of notice and information in advance in accordance with clause 9.34.6(h), the *Nominated Generator* must provide such other documents or information as may be required in accordance with clause 9.34.6(e) after such non-compliance has occurred or commenced.

(j) If non-compliance with the *Rules* is continuing, the notice of non-compliance with the *Rules* provided under clause 9.34.6(e) will be effective in relation to that non-compliance until that non-compliance ends provided that:

(1) the notice specifies that the non-compliance is continuing; and

(2) the *Nominated Generator* notifies the *AER* of the end of the non-compliance no later than 7 days after the non-compliance ends.

(k) Clauses 9.34.6(c) and 9.34.6(d) do not affect the obligations of a *Nominated Generator* with respect to registration with *NEMMCO* or to making payments under the provisions of the *Rules* in respect of:

(1) *Participant fees*;

(2) *prudential requirements*; or

(3) *settlement amounts*.

(l) Within 30 *days* of the end of each quarter in each calendar year, the *AER* must prepare a quarterly report for the previous quarter and make it available upon request to all *Registered Participants* and those *participating jurisdictions* that participated in the *market* during the quarter covered by the report. The quarterly report must include:

(1) a summary of the acts or omissions of the *Nominated Generator* constituting non-compliance with any requirement of the *Rules*, as disclosed in written notices received by the *AER* under this clause 9.34.6 during the quarter covered by the report: and

(2) an assessment by the *AER* of the effect that those acts or omissions have had on the efficient operation, during the quarter covered by the report, of the *spot market*.

(m) **[Deleted]**

(n) No amendment, other than an amendment to correct a typographical error, may be made to an *exempted generation agreement* unless the parties to the *exempted generation agreement* submit to the *AER*:

(1) the proposed amendment, a copy of the *exempted generation agreement* and such supporting information as the parties consider necessary (the "EGA amendment material");

(2) a request that the *AER* seek advice from the *ACCC* as to whether the *ACCC* considers that the proposed amendment would or may:

(i) **[Deleted]**

(ii) **[Deleted]**

(iii) contravene a provision of the Trade Practices Act 1974 (Cth) or the Competition Code of a *participating jurisdiction*; and

(3) if requested by the *AER* to do so, such further information as may be required by the *AER* in order for the *ACCC* to consider the matters referred to in clause 9.34.6(n)(2),

and the proposed amendment is not prohibited under clause 9.34.6(q).

(o) When the parties to an *exempted generation agreement* submit EGA amendment material to the *AER* in accordance with clause 9.34.6(n), they may include as part of the material submitted a written request that the *AER*

and the *ACCC* treat the EGA amendment material as confidential. In such a case the *AER*:

(1) must comply with that request until such time as the parties to the *exempted generation agreement* notify the *AER* in writing that the *AER* is no longer under an obligation to do so; and

(2) must not provide any EGA amendment material to the *ACCC* unless the parties to the *exempted generation agreement* have notified the *AER* in writing that they have agreed acceptable confidentiality arrangements in relation to the EGA amendment material with the *ACCC* and that the *AER* should provide the EGA amendment material to the *ACCC*.

(p) **[Deleted]**

(q) If, within 10 *business days* of receiving the material referred to in clause 9.34.6(n) or such other period as is agreed between the *AER* and the parties to the *exempted generation agreement*, the *AER* responds that:

(1) the *ACCC* considers that the proposed amendment would or may have any or all of the effects referred to in clause 9.34.6(n)(2); or

(2) the *ACCC* considers that it is unable, because of:

(i) insufficient information before it; or

(ii) any confidentiality arrangements in relation to the EGA amendment material agreed between the *ACCC* and the parties to the *exempted generation agreement*,

to reasonably consider whether the proposed amendment would have any or all of the effects referred to in clause 9.34.6(n)(2),

then the proposed amendment must not be made.

(r) If the *AER* has not provided a response to a request made in accordance with clause 9.34.6(n)(2) within:

(1) 10 *business days* of receiving the material referred to in clause 9.34.6(n); or

(2) such other period as is agreed between the *AER* and the parties to the *exempted generation agreement*,

the *ACCC* is deemed to have no objection to the proposed amendment.

(s) If the *AER* notifies the parties to the *exempted generation agreement* that the *ACCC* has no objection to the proposed amendment, or if the *ACCC* is deemed under clause 9.34.6(r) to have no objection to the proposed

amendment, the parties to the *exempted generation agreement* may make the proposed amendment.

(t) This clause 9.34.6 ceases to have effect in respect of a *generating system* the subject of an *exempted generation agreement* upon the termination of that agreement.

9.35 [Deleted]

9.36 [Deleted]

9.37 Transitional Arrangements for Chapter 5 - Network Connection

9.37.1 [Deleted]

9.37.2 Existing connection and access agreements (clause 5.2)

(a) The technical connection and network pricing requirements of the Interconnection and Power Pooling Agreement dated 30 March 1994 between the owners of the Gladstone Power Station and the Queensland Electricity Commission (as amended prior to 18 January 1998) are to be taken to be a *connection agreement* in respect of both the Gladstone Power Station and the Boyne Island aluminium smelter unless replacement *connection agreements* are entered into in respect of the power station and smelter.

(b) Despite anything to the contrary in clause 5.2.2, if the *generating system* at Gladstone Power Station meets the technical connection requirements of the Interconnection and Power Pooling Agreement, or the technical requirements of a replacement *connection agreement* no less onerous than those in the Interconnection and Power Pooling Agreement, the relevant *generating system* is to be deemed to comply with all the technical connection requirements of the *Rules* in respect of the Gladstone Power Station.

(c) Despite anything to the contrary in clause 5.2.2, if the Boyne Island aluminium smelter meets the technical connection requirements of the Interconnection and Power Pooling Agreement, or the technical requirements of a replacement *connection agreement* no less onerous than those in the Interconnection and Power Pooling Agreement, the Boyne Island aluminium smelter is to be deemed to comply with all the technical connection requirements of the *Rules* in respect of the Boyne Island aluminium smelter.

(d) Despite anything to the contrary in clause 5.2.2, if Queensland Rail complies with the technical requirements in the *connection agreements* for Queensland Rail *connections* as at 18 January 1998, Queensland Rail is to

be deemed to comply with all the technical connection requirements of the *Rules*.

(e) *Small Generators* are not required to comply with the conditions of *connection* set out in schedule 5.2 of the *Rules*.

9.37.3 [Deleted]

9.37.4 Regulation of distribution network connection (clause 5.3)

(a) This clause 9.37.4 applies in respect of the regulation of *connection* to a *Queensland distribution network*.

(b) Despite anything to the contrary in the *Rules*, the appropriate regulator is responsible for the regulation of *connection* to a *Queensland distribution network*.

(c) The appropriate regulator is:

(1) until the date the *AER* assumes responsibility for the regulation of *connection* to the *Queensland distribution network* – the *Jurisdictional Regulator* for Queensland; and

(2) from that date – the *AER*.

(d) For the purposes of clause 5.3.6(c), any question as to the fairness and reasonableness of an offer to *connect* to a *Queensland distribution network* is to be decided by the appropriate regulator on the basis of the appropriate regulator's opinion of the fairness and reasonableness of the offer.

(e) If a dispute arises in relation to *connection* to a *Queensland distribution network*, then that dispute must be resolved in accordance with Chapter 8 and for this purpose a reference in Chapter 8 to "*power system*" is deemed to be a reference to the "*Queensland system*".

(f) This clause expires on 1 July 2010.

9.37.5 Forecasts for connection points to transmission network (clause 5.6.1)

If a *Network Service Provider*, on the *Queensland system*, modifies forecast information in accordance with clause 5.6.1(d), then that *Network Service Provider* is not required to notify the relevant *Registered Participant* if it has conflicting confidentiality obligations to other *Registered Participants*.

9.37.6 There is no clause 9.37.6

9.37.7 Cross Border Networks

(a) If:

(1) the *Minister* considers that a *transmission network* or *distribution network* situated in Queensland is a continuation of a *network* situated in another *participating jurisdiction* and should be considered to be part of the *network* of that other *participating jurisdiction*; and

(2) the *Minister* for that other *participating jurisdiction* consents,

then those *Ministers* may nominate that the *network* is deemed to be entirely in that other *participating jurisdiction* and the *Rules* including any relevant *jurisdictional derogations* for the other *participating jurisdiction* are deemed to apply to the *network* as if the *network* were located entirely within that other *participating jurisdiction*.

(b) If a nomination is made under clause 9.37.7(a), then the *jurisdictional derogations* for Queensland do not apply to the continuation of the relevant *network* which is situated in Queensland.

(c) If the *Minister* of another *participating jurisdiction* nominates that the *jurisdictional derogations* for Queensland should apply to a *network* part of which is situated in that other *participating jurisdiction*, then if the *Minister* in respect of Queensland consents, the *jurisdictional derogations* for Queensland are also to apply to that part of the *network* situated in the other *participating jurisdiction*.

9.37.8 [Deleted]

9.37.9 Credible contingency events (clause S5.1.2.1 of schedule 5.1)

(a) The *protection systems* installed on any 110/132kV lines located in Queensland and existing at *market commencement* are deemed to comply with clause S5.1.2.1(d) of schedule 5.1 of the *Rules* except where such *protection system* has a material effect in degrading the stability and security of the *Queensland system* or the *power system*.

9.37.10 Reactive power capability (clause S5.2.5.1 of schedule 5.2)

Clause S5.2.5.1 of schedule 5.2 of the *Rules* is replaced for each of the *generating units* situated at the relevant *power station* listed in the following table by the following:

For the purpose of this clause S5.2.5.1:

'*rated active power output*' means the 'Rated MW (Generated)' (as defined in the *Generating System Design Data Sheet*) for the relevant *synchronous generating unit*; and

'*nominal terminal voltage*' means the 'Nominal Terminal *Voltage*' (as defined in the *Generating System Design Data Sheet*) for the relevant *synchronous generating unit*.

(a) Each of the *generating units*, while operating at any level of *active power* output, must be capable of:

(1) supplying at its terminals an amount of *reactive power* of at least the amount that would be supplied if the *generating unit* operated at *rated active power output*, *nominal terminal voltage* and a lagging power factor of 0.9; and

(2) absorbing at its terminals an amount of *reactive power* of at least the amount that would be absorbed if the *generating unit* operated at *rated active power output*, *nominal terminal voltage* and a leading power factor set out in respect of that *generating unit* in column 3 of the following table.

(b) In the event that any of the relevant power factors referred to in paragraph (a) above cannot be provided in respect of a *generating unit*, the relevant *Generator* must reach a commercial arrangement under its *connection agreement* with the relevant *Network Service Provider*, or with another *Registered Participant*, for the supply of the deficit in *reactive power* as measured at that *generating unit's* terminals.

Power station	**Generating units**	**Leading power factor**
Gladstone	Units 1 to 4	0.99
Gladstone	Units 5 & 6	0.94
Tarong	Units 1 to 4	0.95
Callide “A”	Units 1 to 4	0.95
Callide “B”	Units 1 & 2	0.95
Stanwell	Units 1 to 4	0.95
Swanbank “B”	Units 1 to 4	0.97
Mount Stuart	Units 1 & 2	0.95
Collinsville	Units 1 to 5	0.95

9.37.11 [Deleted]

9.37.12 Voltage fluctuations (clause S5.1.5 of schedule 5.1)

For application in Queensland, clause S5.1.5 of schedule 5.1 of the *Rules* is replaced with the following:

"A *Network Service Provider* whose *network* is a *Queensland transmission network* or a *Queensland distribution network* must include conditions in *connection agreements* in relation to the permissible variation with time of the power *generated* or *load* taken by a *Registered Participant* to ensure that other *Registered Participants* are supplied with a power-*frequency voltage* which fluctuates to an extent that is less than the limit defined by the "Threshold of Perceptibility" or the "Threshold of Irritability" as the case may be for the conditions specified in the paragraph below, in Figure 1 of *Australian Standard* AS2279, Part 4.

A *Network Service Provider* whose *network* is a *Queensland transmission network* or a *Queensland distribution network* must ensure that *voltage* fluctuations caused by the switching or operation of *network plant* does not exceed the following amounts referenced to Figure 1 of *Australian Standard* AS 2279, Part 4:

(1) Above 66kV:

(A) the "Threshold of Perceptibility" when all *network plant* is in service; and

(B) the "Threshold of Irritability" during any *credible contingency event* which is reasonably expected to be of short duration;

(2) 66kV and below: the "Threshold of Irritability" when all *network plant* is in service.

The requirements of paragraphs (1) and (2) above do not apply to events such as switching of *network plant* to or from an abnormal state or to *network* faults which occur infrequently (ie. less than one event per day).

Where the *Rules* (other than this Part E) refer to clause S5.1.5(a) or (b) of schedule 5.1 of the *Rules* then, in so far as that reference relates to a *Network Service Provider* whose *network* is a *Queensland transmission network* or a *Queensland distribution network* or to a *network* which is a *Queensland transmission network* or a *Queensland distribution network*, that reference must be construed as a reference to the immediately preceding paragraph.

A *Network Service Provider* whose *network* is a *Queensland transmission network* or a *Queensland distribution network* is responsible only for excursions in *voltage* fluctuations outside the range defined in the first two paragraphs of this clause S5.1.5 caused by *network plant* and the pursuit of

all reasonable measures available under the *Rules* to remedy the situation in respect of *Registered Participants* whose *plant* does not perform to the standards defined by clause S5.2.5.2(c) of schedule 5.2 of the *Rules* for *Generators*, the standards set out in the first paragraph below for *Customers* and the standards set out in the second paragraph below for *Market Network Service Providers.*

Each *Customer* must ensure that variations in current at each of its *connection points* including those arising from the *energisation,* de-energisation or operation of any *plant* within or supplied from the *Customer's substation* are such that the contribution to the magnitude and rate of occurrence of the resulting *voltage* disturbance does not exceed the following limits:

(i) where only one *Customer* has a *connection point* associated with the point of *supply*, the limit is 80% of the threshold of perceptibility set out in Figure 1 of *Australian Standard* AS2279, Part 4; or

(ii) where two or more *Distribution Network Service Providers* or *Customers* causing *voltage* fluctuations have a *connection point* associated with a point of *supply*, the threshold of perceptibility limit is to be shared in a manner to be agreed between the *Distribution Network Service Provider* and the *Registered Participant* in accordance with *good electricity industry practice* that recognises the number of *Registered Participants* in the vicinity that may produce *voltage* fluctuations.

Each *Market Network Service Provider* must ensure that variations in current at each of its *connection points* arising from the *energisation,* de-energisation or operation of any of its *plant* involved in the provision of *market network services* are such that the contribution to the magnitude and rate of occurrence of the resulting *voltage* disturbance does not exceed the following limits:

(i) where only one *Market Network Service Provider* has a *connection point* associated with the point of *supply*, the limit is 80% of the threshold of perceptibility set out in Figure 1 of *Australian Standard* AS2279, Part 4; or

(ii) where two or more *Distribution Network Service Providers, Market Network Service Providers* or *Customers* causing *voltage* fluctuations have a *connection point* associated with a point of *supply*, the threshold of perceptibility limit is to be shared in a manner to be agreed between the *Distribution Network Service Provider* and the *Registered Participant* in accordance with *good electricity industry practice* that recognises the number of *Registered Participants* in the vicinity that may produce *voltage* fluctuations.

For these purposes, references to *Australian Standard* AS2279 are references to that standard as it existed prior to it being superseded by AS/NZS 61000.3.7:2001."

9.37.13 [Deleted]

9.37.14 [Deleted]

9.37.15 [Deleted]

9.37.16 [Deleted]

9.37.17 [Deleted]

9.37.18 [Deleted]

9.37.19 Generating unit response to disturbances (clause S5.2.5.3 of schedule 5.2)

(a) Despite the provisions of clause S5.2.5.3 of schedule 5.2 of the *Rules*, the *generating units* listed in the following table are not required to operate continuously outside the corresponding *frequency* band specified in column three of the following table:

Power station	Generating units	Frequency band
Tarong	Units 1 to 4	47.5 Hz to 51 Hz
Callide “B”	Units 1 & 2	47.5 Hz to 51 Hz
Stanwell	Units 1 to 4	47.5 Hz to 51 Hz
Gladstone	Units 1 to 6	47.5 Hz to 51.5 Hz
Collinsville	Units 1 to 4	48.0 Hz to 51 Hz
	Unit 5	48.0 Hz to 52 Hz

(b) **[Deleted]**

(b1) **[Deleted]**

9.37.20 Frequency control (clause S5.2.5.11 of schedule 5.2)

For each of the *generating units* situated at the *power stations* listed in the following table, the application of clause S5.2.5.11 of schedule 5.2 of the *Rules* is modified by deleting clause S5.2.5.11(b)(3) and replacing it with the following:

"(d) A *Generator* must ensure that each of its *scheduled generating units* is capable of automatically increasing its *active power* output by 4% for a 0.1 Hz reduction in *system frequency*".

Power station	**Generating units**
Tarong	Units 1 to 4
Callide "A"	Units 1 to 4
Callide "B"	Units 1 & 2
Stanwell	Units 1 to 4
Swanbank "A"	Units 1 to 6
Swanbank "B"	Units 1 to 4

9.37.21 Excitation control system (clause S.5.2.5.13 of schedule 5.2)

(a) For each of the *generating units* listed in the following table:

(1) the application of clause S5.2.5.13(a) of schedule 5.2 of the *Rules* is modified by amending it to ensure that the short-time average *generating unit* stator *voltage* at highest rated power output level is not required to be more than 5% above nominal stator *voltage;* and

(2) the application of clause S5.2.5.13(b) of schedule 5.2 of the *Rules* is modified by deleting the words "all operating conditions" and replacing them with the words "all normal operating conditions and all *single credible contingency events*".

(b) For Wivenhoe Power Station, the application of clause S5.2.5.13(c) of schedule 5.2 of the *Rules* is modified by replacing sub-clause (c) with the words "providing a five second ceiling *excitation voltage* to a maximum of 730 V excitation *voltage*."

(c) **[Deleted]**

(d) For Collinsville Power Station, any variation to the minimum performance requirements specified in clause S5.2.5.13 of schedule 5.2 of the *Rules* is to be limited to figures agreed with the *Network Service Provider* to whose *network* the Collinsville Power Station is *connected.*

Power station	Generating units
Tarong	Units 1 to 4
Callide “A”	Units 1 to 4
Callide “B”	Units 1 & 2
Stanwell	Units 1 to 4
Swanbank “A”	Units 1 to 6
Swanbank “B”	Units 1 to 4
Wivenhoe	Units 1 & 2
Barron Gorge	Units 1 & 2
Kareeya	Units 1 to 4
Gladstone	Units 1 to 6
Collinsville	Units 1 to 5

(e) A *Generator* whose *generating unit* is situated in Queensland must ensure that each new *synchronous generating unit* of greater than 100MW is fitted with a *static excitation system* or some other *excitation control system* which will provide *voltage* regulation to within 0.5% of the selected setpoint value unless otherwise agreed with the relevant *Network Service Provider*.

9.37.22 [Deleted]

9.37.23 Annual forecast information for planning purposes (schedule 5.7)

Each *Registered Participant* that has a *connection point* to a *Queensland transmission network* must submit to the relevant Queensland *Transmission Network Service Provider* a forecast of the annual *energy* consumption associated with each *connection point* together with the information set out in schedule 5.7 of the *Rules*.

9.38 Transitional Arrangements for Chapter 6 - Network Pricing

9.38.1 [Deleted]

9.38.2 [Deleted]

9.38.3 Arrangements for regulation of distribution pricing

(a) The *Queensland Competition Authority* remains *Jurisdictional Regulator* for Queensland until the Queensland Minister makes a transfer of regulatory responsibility to the *AER* under clause 11.14.4.

(b) Subject to clause 11.14.3, the regulation of *distribution network* service pricing for a *Queensland distribution network* must be in accordance with the *Electricity Act* and the *Queensland Competition Authority Act*.

(c) This clause expires on 1 July 2010 or an earlier date nominated by the Queensland Minister.

9.38.4 Interconnectors between regions

For the purposes of the *Rules*, the *interconnector* between Armidale in New South Wales and Tarong in Queensland, to the extent that it forms part of the *Queensland system*, is deemed to be a *regulated interconnector*.

9.38.5 Transmission pricing for exempted generation agreements

(a) Notwithstanding the provisions of Chapter 6, the amounts payable for *transmission services* in respect of a *generating system* or a *load* the subject of an *exempted generation agreement* by a *Generator* or *Customer* which is referred to in an *exempted generation agreement*, or the relevant *State Electricity Entity* nominated pursuant to clause 9.34.6(a), as the case may be, will be the amounts payable under the *connection agreement* in respect of that *generating system* or *load*.

(b) If the amounts payable for *transmission services* under clause 9.38.5(a) differ to those that would have been payable if the amounts had been calculated in accordance with the provisions of Chapter 6 (as modified by this clause 9.38) then the amount of that difference is to be recovered in accordance with clause 6.5.6(a).

(c) For the purpose of clause 9.38.5(b), the amount of any difference is to be recovered from *Transmission Customers* located in Queensland and connected to the *Queensland system* and is not otherwise to be taken into account in determining *Transmission Customer common service charges* under clause 6.5.6(a).

(d) For the application of clause 9.38.5(a) to the *generating system* at Gladstone Power Station and the *load* at the Boyne Island aluminium smelter, the *connection agreement* referred to is the Interconnection and Power Pooling Agreement dated 30 March 1994 between the owners of the Gladstone Power Station and the Queensland Electricity Commission (as amended prior to 18 January 1998), or any *connection agreements* entered into in respect of those *connection points* in replacement of that agreement, provided that in the latter case any difference to be recovered pursuant to clause 9.38.5(b) must not exceed that which would have applied had that agreement continued.

(e) Clause 9.38.5(a) continues to apply in respect of the *generating system* at Gladstone Power Station and the *load* at the Boyne Island aluminium

smelter despite the entering into *connection agreements* in replacement of the Interconnection and Power Pooling Agreement as envisaged in clause 9.38.5(d).

9.39 Transitional Arrangements for Chapter 7 - Metering

9.39.1 Metering installations to which this clause applies

(a) The transitional *metering* provisions set out in schedule 9G1 apply to Queensland in respect of Chapter 7.

(b) Notwithstanding the application of schedule 9G1 in Queensland, the transitional arrangements set out in this clause 9.39 apply in relation to a *metering installation* (including a *check metering installation*) that meets the following criteria:

(1) at 1 October 1997, the *metering installation*:

(i) was a *metering installation* to which the *Queensland Grid Code* applied; and

(ii) complied with the metering requirements of the *Queensland Grid Code*; and

(2) excepting normal repair and maintenance, no part of the *metering installation* has been modified or replaced since 1 October 1997.

9.39.2 [Deleted]

9.39.3 [Deleted]

9.39.4 [Deleted]

9.39.5 [Deleted]

9.40 Transitional Arrangements for Chapter 8 - Administration Functions

9.40.1 [Deleted]

9.40.2 [Deleted]

9.40.3 [Deleted]

9.41 [Deleted]

Schedule 9E1 - Exempted Generation Agreements

Station Name	Owner or Operator of Station	Date of Agreement
Gladstone Power Station	GPS Participants[1]	30 March 1994
Collinsville Power Station	Collinsville Participants[2]	30 November 1995
Townsville Power Station	Transfield Townsville Pty Ltd A.C.N. 075 001 991	2 August 1996
Oakey Power Station	Oakey Power Pty Ltd A.C.N. 075 258 114	10 September 1996
Mt Stuart Power Station	Origin Energy Mt Stuart, a general partnership between Origin Energy Mt Stuart BV (ARBN 079 232 572) & Origin Energy Australia Holdings BV (ARBN 079 234 165)	5 August 1996
Various Sugar Mills	Queensland Sugar Power Pool Pty Ltd A.C.N. 072 003 537	21 December 1995
Somerset Dam Hydro	Hydro Power Pty Ltd A.C.N. 010 669 351	1 June 1996
Browns Plains Landfill Gas	EDL LFG (QLD) Pty Ltd A.C.N. 071 089 579 and Energex Limited A.C.N. 078 849 055	31 July 1996

1

GPS Participants	Each of:	GPS Power Pty Ltd, A.C.N. 009 103 422; GPS Energy Pty Ltd, A.C.N. 063 207 456; Sunshine State Power B.V., A.R.B.N. 062 295 425; Sunshine State Power (No 2) B.V., ARBN 063 382 829; SLMA GPS Pty Ltd, A.C.N. 063 779 028; Ryowa II GPS Pty Ltd, A.C.N. 063 780 058; and YKK GPS (Queensland) Pty Ltd, A.C.N. 062 905 275.

2

Collinsville Participants	Each of:	Transfield Collinsville Pty Ltd, A.C.N. 058 436 847; and Transfield Services Collinsville B.V., A.R.B.N. 070 968 606.

Part F – Jurisdictional Derogations for Tasmania

9.41A [Deleted]

9.42 Definitions and interpretation

9.42.1 Definitions

For the purposes of this Part F:

(a) a word or expression defined in the glossary in chapter 10 has the meaning given to it in the glossary, unless it is referred to in column 1 of the following table; and

(b) a word or expression referred to in column 1 of the following table has the meaning given to it in column 2 of the table:

Column 1	**Column 2**
Aurora	Aurora Energy Pty Ltd (ABN 85 082 464 622).
Basslink	The project for the interconnection, by means of a DC electricity transmission link, of the Victorian and Tasmanian *transmission systems*.
ESI Act	The Electricity Supply Industry Act 1995 (Tas).
George Town Substation	The electricity substation located on the land comprised in Certificate of Title Volume 34076 Folio 1.

Column 1	**Column 2**
Hydro Tasmania	The Hydro-Electric Corporation (ABN 48 072 377 158).
Interconnection Date	The date on which *Basslink* enters into commercial operation, being the Commissioning Date as defined in the Basslink Project Interpretation Memorandum dated 29 November 2002 between the Crown in right of the State of Tasmania, Basslink Pty Ltd, National Grid Transco plc, National Grid Holdings Limited and *Hydro Tasmania*.
Minister	The Minister for the time being responsible for administering the *ESI Act*.
National Electricity Code	The code of conduct called the National Electricity Code approved, in accordance with section 6(1) of the Old National Electricity Law, as the initial Code for the purposes of that Law, and as amended from time to time in accordance with its terms and the Old National Electricity Law.
Old National Electricity Law	The Schedule to the National Electricity (South Australia) Act 1996 (SA) as in force from time to time before the commencement of section 12 of the National Electricity (South Australia) (New National Electricity Law) Amendment Act 2005 (SA).
Price Control Regulations	The Electricity Supply Industry (Price Control) Regulations made under the *ESI Act*.
Reliability and Network Planning Panel	The panel of that name established by the *Tasmanian Electricity Regulator* of the *Tasmanian Code*.
Retail Licence	A licence authorising the retailing of electricity issued under the *ESI Act*.

Column 1	**Column 2**
Tasmanian Code	The Tasmanian Electricity Code issued under section 49A of the *ESI Act*.
Tasmanian Code Participant	A person who is a Code Participant within the meaning of the *Tasmanian Code*.
Tasmanian Determination on Power System Frequency Operating Standards	The Determination on Frequency Operating Standards for the Tasmanian Power System issued by the *Reliability and Network Planning Panel*.
Tasmanian Electricity Regulator	The office of the Regulator established pursuant to section 5 of the *ESI Act*.
Tasmanian Network Service Provider	A person who is a *Network Service Provider* in respect of a *network* located in Tasmania (including the *Network Service Provider* in respect of *Basslink).*
Tasmanian power system security and reliability standards	The standards governing security and reliability of the power system located in Tasmania determined by the *Reliability and Network Planning Panel* in accordance with the *Tasmanian Code*, including the *Tasmanian Determination on Power System Frequency Operating Standards* and the standards for capacity reserves.
Third Tranche Commencement Date	The day which the *Minister* notifies *NEMMCO* is the day on which customers taking an amount of electricity equal to or in excess of 0.75GWh/yr and less than 4GWh/yr at a *connection point* in Tasmania first become contestable customers (within the meaning of the *ESI Act*).
Transend	Transend Networks Pty Limited (ABN 57 082 586 892).
Transition Date	The date on and from which section 6 of the Electricity - National Scheme (Tasmania) Act 1999 commences.

9.42.2 Interpretation

In this Part F, references to Tasmania do not include King Island or Flinders Island unless the context otherwise requires.

9.42.3 National grid, power system and related expressions

Notwithstanding anything else in the *Rules*, but subject to the other provisions of this Part F, on and from the *Transition Date*:

(a) the *connected transmission systems* and *distribution systems* located in Tasmania are to be treated as forming part of the *national grid* and the interconnected *transmission* and *distribution networks*; and

(b) the electricity power system located in Tasmania, including associated *generation* and *transmission* and *distribution networks* for the *supply* of electricity, is to be treated as forming part of the *power system* and the electricity system,

even if they are not *connected* to a *network* or *networks* in other *participating jurisdictions*.

9.43 Transitional arrangements for Chapter 1 - Introduction - Validity of certain actions taken prior to Transition Date

If:

(a) the *AEMC*, the *AER*, *NEMMCO*, any *Rules body*, any *Registered Participant*, the *Tasmanian Electricity Regulator* or any *Tasmanian Code Participant* takes any action to enable any entity to perform functions under, or obligations imposed by, a provision of the *Rules* before the *Transition Date* in anticipation of the relevant provision applying in Tasmania on the *Transition Date*; and

(b) the action was taken so far as reasonably practicable in accordance with the provision (as though the provision applied in Tasmania at the time the relevant action was taken),

then the action is deemed to have been validly taken in accordance with that provision with effect on and from the *Transition Date*. For the avoidance of doubt:

(c) any action taken for the purposes of this clause 9.43 by the *Tasmanian Electricity Regulator* prior to the *Transition Date* to enable the *Jurisdictional Regulator* to perform functions under, or obligations imposed by, a provision of the *Rules* in anticipation of that provision coming into effect on the *Transition Date* is deemed to have been taken by the *Jurisdictional Regulator*; and

(d) the *AEMC*, the *AER*, *NEMMCO*, any *Rules body* or other person ("Recipient") may treat any submission, application, approval, statement or document ("application") given to it by a person in anticipation of a provision of the *Rules* applying in Tasmania as having been given to the Recipient under that provision of the *Rules* and may take action under the *Rules* on the basis of that application or taking into account that application.

9.44 Transitional arrangements for Chapter 2 – Registered Participants and Registration - Customers (clause 2.3.1(e))

For the purposes of clause 2.3.1(e), and for the purposes of clause 2.4.2(b) in so far as it relates to *Customers*, a person satisfies the requirements of Tasmania for classification of a *connection point* of that person if that person is the holder of a *Retail Licence* or is a contestable customer within the meaning of the *ESI Act* in respect of that *connection point*.

9.45 Transitional arrangements for Chapter 3 - Market Rules

9.45.1 Tasmanian Region (clause 3.5)

(a) Notwithstanding clause 3.5, the State of Tasmania is, and must be, one *region* and that *region* must not include any areas which fall outside of the State of Tasmania.

(b) Notwithstanding clause 3.5.1(c), the *regional reference node* for the Tasmanian *region* is the 220kV *busbar* located at the *George Town Substation*.

(c) Clauses 9.45.1(a) and (b) cease to have effect from the beginning of the *Third Tranche Commencement Date*.

9.45.2 Administered Price Cap (clause 3.14.1)

Until a different *administered price cap* is developed, authorised and published in accordance with clause 3.14.1(a) for the Tasmanian *region*, the administered price cap for the Tasmanian region is:

(1)$100/MWh between 7.00 am and 11.00 pm on a *business day*; and

(2)$50/MWh at all other times.

9.45.3 Settlement Residue Auctions (clause 3.18.1)

(a) To avoid doubt, *Basslink* is not a *directional interconnector* for the purposes of clause 3.18.

(b) Clause 9.45.3(a) ceases to have effect at the end of the second anniversary of the *Transition Date*.

9.46 Transitional arrangements for Chapter 4 - Power System Security

9.46.1 Satisfactory Operating State (clause 4.2.2)

If the *frequency* at a *busbar* located in Tasmania is within the containment range for a load event as specified in the *Tasmanian Determination on Power System Frequency Operating Standards*, then that *frequency* will be taken to be within:

(1) the *normal operating frequency excursion band* for the purposes of the *Rules*; and

(2) any *frequency* band (whatever it is called) specified in or under the *Rules* or the *power system security and reliability standards* which is applied by *NEMMCO* or any other person for a similar purpose as the *normal operating frequency excursion band* is applied under clause 4.2.2(a).

9.46.2 Secure operating state and power system security (clause 4.2.6(c))

In applying the *power system security* principle specified in clause 4.2.6(c) in relation to Tasmania, *NEMMCO* must have regard to the power *frequency* bands specified in the *Tasmanian Determination on Power System Frequency Operating Standards* in substitution for the *frequency* bands contemplated by that clause.

9.46.3 Market Customer obligations (clause 4.3.5(b))

Notwithstanding clause 4.3.5(b), *Market Customers* must provide their *interruptible load* in respect of *connection points* located in Tasmania in manageable blocks spread over a number of steps within under-*frequency* bands down to the lower limit of the "extreme frequency excursion tolerance limits" (as specified in the *Tasmanian Determination on Power System Frequency Operating Standards*) and not 47.0Hz as specified in clause 4.3.5(b).

9.46.4 Power System Frequency Control Responsibilities (clause 4.4.1)

Notwithstanding clause 4.4.1 and the *power system security and reliability standards*, *NEMMCO* must use reasonable endeavours to ensure that, in Tasmania, the *frequency* levels specified in the *Tasmanian Determination on Power System Frequency Operating Standards* are achieved.

9.47 Transitional arrangements for Chapter 5- Network Connection

9.47.1 Existing Connection Agreements

The following agreements are each to be taken to be a *connection agreement* for the purposes of clause 5.2:

(a) the Connection Agreement dated 1 July 1998 between *Aurora* and *Hydro Tasmania*;

(b) the Connection and Network Services Agreement dated 1 July 1998 between *Transend* and *Aurora*;

(c) the Connection and Network Services Agreement dated 1 July 1998 between *Transend* and *Hydro Tasmania*;

(d) the Basslink Connection Agreement dated 28 January 2000 between National Grid International Limited and *Transend*; and

(e) any other connection agreement entered into prior to the *Transition Date* in accordance with the *Tasmanian Code*.

9.47.2 [Deleted]

9.47.3 Frequency variations (clauses S5.1.3 and S5.1.10)

In performing the functions contemplated by clauses S5.1.3 and S5.1.10 of schedule 5.1 of the *Rules* in relation to that part of the *power system* located in Tasmania, *NEMMCO* and *Tasmanian Network Service Providers* must apply the power system *frequency* bands specified in the *Tasmanian Determination on Power System Frequency Operating Standards* in Tasmania in substitution for the *frequency* bands specified in the *power system security and reliability standards*.

9.47.4 Fault clearance times (clauses S5.1.9 and S5.1a.8 and table S5.1a.2)

(a) Notwithstanding clause S5.1.9 of schedule 5.1 of the *Rules* and clause S5.1a.8, and table S5.1a.2, of schedule 5.1a of the *Rules*, if:

(1) there is no system for communication between the faulted end and the remote end of a power line located in Tasmania; or

(2) there is a maintenance *outage* of the system for communication between the faulted end and the remote end of a power line located in Tasmania,

then the remote end maximum *fault clearance time* in respect of that power line is 600 milliseconds.

(b) Notwithstanding clause S5.1.9 of schedule 5.1 of the *Rules* and clause S5.1a.8, and table S5.1a.2, of schedule 5.1a of the *Rules*, if there is no circuit breaker failure protection in respect of a power line located in Tasmania, then the breaker fail maximum *fault clearance time* for that line is 1100 milliseconds.

(c) Clauses 9.47.4(a) and (b) cease to have effect at the end of the first anniversary of the *Transition Date*.

9.48 Transitional arrangements for Chapter 6 - Transmission and Distribution Pricing

9.48.1 [Deleted]

9.48.2 Transmission Service Pricing

(a) A "Pre-NEM Determination" is a determination, decision or ruling made or set by the *ACCC* which:

(1) is made under any of the *ESI Act*, the *Price Control Regulations* or the *Tasmanian Code* (together called the “Tasmanian regulatory regime”);

(2) relates to or is connected with transmission pricing (including, without limitation, a determination, decision or ruling relating to the setting or re-setting of a revenue cap);

(3) is made prior to the *Transition Date*, but applies until a date which falls after the *Transition Date*; and

(4) is equivalent to or has substantially the same effect as a determination, decision or ruling (“Equivalent Determination”) which the *AER* may make or set under the *Rules* or which is contemplated by the *Rules*.

(b) Subject to clause 9.48.2(d), a Pre-NEM Determination is:

(1) deemed to have been validly made or set under the *Rules* in accordance with any procedures or steps which apply to the making of an Equivalent Determination; and

(2) deemed to be an Equivalent Determination under the *Rules*.

(c) Subject to clause 9.48.2(d), any action taken by a *Tasmanian Code Participant* as a result of, or to implement or following a Pre-NEM Determination under the Tasmanian regulatory regime in accordance with the instruments comprising that regime is deemed to have been validly taken in accordance with the *Rules*.

(d) If, at any time after the *Transition Date*, it appears to the *AER* that:

(1) a Pre-NEM Determination or action referred to in clause 9.48.2(c) is inconsistent with the relevant principles in the *Rules* in a material way; and

(2) the inconsistency is due to a material difference between the Tasmanian regulatory regime and the *Rules* or the *National Electricity Code* (in the form the instruments comprising that regime and the *Rules* or the *National Electricity Code* (as the case may be) were in at the time of the Pre-NEM Determination or action),

then the *AER* may re-open the Pre-NEM Determination or disallow the action by written notice to the *Minister*. A notice under this clause 9.48.2(d) must set out a summary of the reasons why the *AER* is giving the notice. Clause 9.48.2(b) or (c) (as applicable) ceases to apply to a Pre-NEM Determination or action the subject of a notice under this clause 9.48.2(d) from the time specified in the notice.

(e) To avoid doubt, the *AER* may make or set a determination, decision or ruling in accordance with the *Rules* that replaces a Pre-NEM Determination re-opened under clause 9.48.2(d).

(f) [**Deleted**]

(g) If:

(1) Chapter 6 of the *National Electricity Code* was amended after 22 November 2000 and before the *Transition Date* or Chapter 6 of the *Rules* is amended before the *Transition Date*;

(2) those amendments contemplate a change in the allocation of costs amongst users of *transmission networks*; and

(3) those amendments contemplate transitional arrangements for the phasing in of that change,

then equivalent transitional arrangements also apply to users of *transmission networks* located in Tasmania, and the prices which apply immediately before the *Transition Date* are the starting point for the phase-in.

9.48.3 Distribution Service Pricing – Jurisdictional Regulator

(a) The *Tasmanian Electricity Regulator* remains *Jurisdictional Regulator* for Tasmania until the Tasmanian Minister makes a transfer of regulatory responsibility to the *AER* under clause 11.14.4.

(b) This clause expires on 1 July 2012 or an earlier date fixed by the Tasmanian Minister and notified in the Tasmanian Government Gazette.

9.48.4 Distribution Service Pricing

(a) For the purposes of clause 11.14.3(a), but subject to clauses 11.14.3, 11.14.4 and 11.14.6, the regulation of *distribution service* pricing for any *distribution network* situated in Tasmania must be in accordance with the *ESI Act* and the *Tasmanian Code* to the exclusion of provisions or former provisions of these Rules that would otherwise be applicable.

(b) This clause expires on 1 July 2012 or an earlier date fixed by the Tasmanian Minister and notified in the Tasmanian Government Gazette.

9.48.4A Ring fencing

On the *AER*'s assumption of responsibility for the economic regulation of *distribution services* in Tasmania, the following guidelines (as amended or substituted from time to time) will be taken to be distribution ring-fencing guidelines issued by the *AER* under Rule 6.17:

(1) *Guideline for Ring-fencing in the Tasmanian Electricity Supply Industry* (dated October 2004); and

(2) *Electricity Distribution and Retail Accounting Ring-fencing Guidelines: Electricity Guideline No 2.2, Issue No 3, May 2005*.

Note:

The AER will assume responsibility for the economic regulation of distribution services on the transfer of regulatory responsibility under clause 11.14.4.

9.48.4B Uniformity of tariffs for small customers

(a) In making a distribution determination or approving a *pricing proposal* for a Tasmanian *Distribution Network Service Provider*, the *AER* must ensure that distribution tariffs for small customers of a particular class are uniform regardless of where in mainland Tasmania the customer is supplied with electricity.

(b) In this clause, *small customer* has the same meaning as in regulations under the *Electricity Supply Industry Act 1995* (Tas).

9.48.5 Transmission network

For the purpose of the *Rules*, a *network* operating at "extra high voltage" (as that term is defined in the *ESI Act*) is deemed to be a *transmission network*.

9.48.6 Deemed regulated interconnector

For the purposes of the *Rules*, any *interconnector* between *regions* in Tasmania in existence when those *regions* are established, to the extent that it forms part of the *power system* in Tasmania, is deemed to be a *regulated interconnector*.

9.49 Transitional arrangements for Chapter 8 - Administrative Functions

9.49.1 Frequency Standards (clause 8.8.1)

Notwithstanding anything else in the *Rules*, but subject to the other provisions of this Part F:

(a) on and from the *Transition Date* until the start of the *Interconnection Date*, the *power system security and reliability standards* applicable in Tasmania are the *Tasmanian power system security and reliability standards* and not those determined by the *Reliability Panel* under clause 8.8;

(b) on and from the *Interconnection Date* until the end of the second anniversary of the *Transition Date*, the standards governing *frequency* in respect of that part of the *power system* located in Tasmania are those set out in the *Tasmanian Determination on Power System Frequency Operating Standards* and not those in the *power system security and reliability standards* or applying elsewhere in or under the *Rules*; and

(c) after the second anniversary of the *Transition Date*, the standards governing *frequency* in respect of that part of the *power system* located in Tasmania are those set out in the *power system security and reliability standards* determined as contemplated in clause 9.49.3 and not those in any other set of standards or applying elsewhere in or under the *Rules*,

and provisions of the *Rules* referring to or relating to *frequency*, *frequency operating standards*, *frequency* bands, *frequency* ranges or *frequency* limits must be interpreted accordingly.

9.49.2 Termination of frequency derogations

Clauses 9.46.1, 9.46.2, 9.46.3, 9.46.4 and 9.47.3 cease to have effect from the end of the second anniversary of the *Transition Date*.

9.49.3 Reliability Panel

Before the first anniversary of the *Transition Date*, the *Reliability Panel* must determine *power system security and reliability standards* under clause 8.8 that, in so far as they apply in respect of Tasmania, reflect the principles set out in clause 9.49.4.

9.49.4 Principles to be applied by Reliability Panel

In determining and amending *power system security and reliability standards* the *Reliability Panel* must ensure that, in so far as they apply in respect of Tasmania, those standards reflect the following principles:

(a) in so far as they relate to *frequency*, such standards must be made having regard to the following:

(1) any existing standards in relation to those matters;

(2) the costs and benefits of any change proposed to those existing standards; and

(3) the size and characteristics of the separate systems that make up the *power system*;

(b) where the *network* or *networks* located in a particular area or *region* in Tasmania is or are only *connected* to other areas or *regions* by means of an asynchronous link, the *power system security and reliability standards*, in so far as they relate to *frequency*, may incorporate different standards for the first area or *region* to those applying elsewhere in the *power system*; and

(c) the *power system security and reliability standards*, in so far as they relate to *frequency*, must allow less stringent standards for the *frequency* of a *network* or *networks* located in a particular area or *region* in Tasmania when that area or *region* is isolated from the remainder of the *power system*.

Part G - Schedules to Chapter 9

Schedule 9G1 - Metering Transitional Arrangements

1. Introduction

(a) The following minimum requirements apply in respect of *metering installations* commissioned before 13 December 1998.

(b) **[Deleted]**

2. [Deleted]

3. General Principle

The general principle is that *meters* are required and a *metering installation(s)* capable of recording half-hour *energy* flows and of providing electronic data for transfer to the *metering database* is to be in place for each *Market Participant's connection point(s)* before the *Market Participant* is permitted to participate in the *market*, and there will be no relaxation of this principle in the *jurisdictional derogations.*

4. [Deleted]

5. Accuracy Requirements

5.1 Existing Metering Installations Transitional Exemptions

In addition to those allowances in clause S7.2.2 of schedule 7.2 - "Metering installations commissioned prior to 13 December 1998", the following conditions/exemptions apply:

(a) For *Generators*, *generated* quantities together with estimates for *generating unit* auxiliary loads may be used provided there is an agreed method with *NEMMCO* for determining *sent-out* energy. [refer to clause 7.3.2]

(b) The *check metering* requirements of the *Rules* do not have to be met for Type 1 *metering installations*. A minimum of partial *check metering* is required for Types 1 and 2 *metering installations*. [refer to clause S7.2.4 of schedule 7.2 of Chapter 7]

(c) Joint use of secondary circuits for *revenue metering* is permitted for Type 1 *metering installations*. [refer to cl.S7.2.6.1(a) of schedule 7.2 of Chapter 7]

5.2 [Deleted]

6. [Deleted]

7. [Deleted]

8. [Deleted]

9. [Deleted]

10. [Deleted]

CHAPTER 10

10. GLOSSARY

AARR

The *aggregate annual revenue requirement* for *prescribed transmission services.*

abnormal conditions

A condition described in clause 4.2.3(f).

above-standard system shared transmission service

A *shared transmission service* that exceeds the requirements referred to in paragraph (a)(1) or (2) of the definition of *negotiated transmission service* principally as a consequence of investments that have *system-wide benefits*.

ACCC

Australian Competition and Consumer Commission as established under the Trade Practices Act 1974 (Cth).

acceptable credit criteria

The credit criteria defined in clause 3.3.3.

acceptable credit rating

The credit rating determined by *NEMMCO* under clause 3.3.4.

accepted restriction offer

A *restriction offer* accepted by *NEMMCO* in accordance with the *restriction offer procedures.*

access charge

For a *Transmission Network Service Provider* - an amount described in clause 5.4A(g)-(j).

For a *Distribution Network Service Provider* - in respect of access to:

(a) *negotiated distribution services* which would have been *negotiated distribution services* regardless of the operation of clause 6.24.2(c), an amount described in clause 5.5(f)(4); and

(b) *negotiated distribution services* which would have been treated as *negotiated transmission services* were it not for the operation of clause 6.24.2(c), an amount described in clause 5.4A(g)-(j).

access standard

Either an *automatic access standard* or a *negotiated access standard* for a particular technical requirement as recorded in a *connection agreement*.

Accredited Service Provider category

A category of registration of a *Metering Provider* established by *NEMMCO* under S7.4.2(b) as a consequence of requirements of a *participating jurisdiction* to install *metering installations*.

accumulated energy data

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

activate, activated, activation

The operation of a *generating unit* (other than a *scheduled generating unit*) at an increased *loading level* or reduction in demand (other than a *scheduled load*) undertaken in response to a request by *NEMMCO* in accordance with an *unscheduled reserve contract*.

active energy

A measure of electrical energy flow, being the time integral of the product of *voltage* and the in-phase component of current flow across a *connection point*, expressed in watthour (Wh).

active power

The rate at which *active energy* is transferred.

active power capability

The maximum rate at which *active energy* may be transferred from a *generating unit* to a *connection point* as specified or proposed to be specified in a *connection agreement* (as the case may be).

additional intervention claim

Has the meaning given in clause 3.12.2(k).

adequately damped

In relation to a *control system*, when tested with a step change of a feedback input or corresponding reference, or otherwise observed, any oscillatory response at a *frequency* of:

(a) 0.05 Hz or less, has a damping ratio of at least 0.4;

(b) between 0.05 Hz and 0.6 Hz, has a halving time of 5 seconds or less (equivalent to a damping coefficient –0.14 nepers per second or less); and

(c) 0.6 Hz or more, has a damping ratio of at least 0.05 in relation to a *minimum access standard* and a damping ratio of at least 0.1 otherwise.

ADJR Act

The Administrative Decisions (Judicial Review) Act 1977 (Cth).

adjusted gross energy

The *energy* adjusted in accordance with clause 3.15.5 (for a *transmission network connection point*) or clause 3.15.5A (for a *virtual transmission node*) or clause 3.15.4 (for any other *connection point*).

administered floor price

A price floor to apply to a *regional reference price*, with the levels of the price floor being administered under clause 3.14.1 and the circumstances under which it can be invoked by *NEMMCO* being determined as set out in clause 3.14.2.

administered price cap

A price cap to apply to a *dispatch price*, *regional reference price* or *ancillary service price*, with the levels of the price cap being set in accordance with clause 3.14.1 and the circumstances under which it can be invoked by *NEMMCO* being determined as set out in clause 3.14.2.

administered price period

A period declared by *NEMMCO*, in accordance with clause 3.14.2, in which an *administered price cap* may be invoked.

Adviser

The Dispute Resolution Adviser specified in clause 8.2.2(a).

Adviser referral notice

A notice referring a dispute to the *Adviser* for the purposes of clause 8.2.5.

AEMC

The Australian Energy Market Commission, which is established under section 5 of the Australian Energy Market Commission Establishment Act 2004 (SA).

AER

The Australian Energy Regulator, which is established by section 44AE of the Trade Practices Act 1974 (Cth).

affected participant's adjustment claim

Has the meaning given in clause 3.12.2(g)(3).

Affected Participant

(a) In respect of a particular *direction* in an *intervention price trading interval*:

(1) a *Scheduled Generator* or *Scheduled Network Service Provider*:

(i) which was not the subject of the *direction*, that had its *dispatched* quantity affected by that *direction*; or

(ii) which was the subject of the *direction*, that had its *dispatched* quantity for other *generating units* or other services which were not the subject of that *direction* affected by that *direction*, however, the *Scheduled Generator* or *Scheduled Network Service Provider* is only an *Affected Participant* in respect of those *generating units* and services which were not the subject of that *direction*; or

(2) an *eligible person* entitled to receive an amount from *NEMMCO* pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units for the *intervention price trading interval*, as a result of the *direction*; and

(b) in relation to the exercise of the *RERT* under rule 3.20:

(1) a *Scheduled Generator* or *Scheduled Network Service Provider*:

(i) whose *plant* or *scheduled network service* was not *dispatched* under a *scheduled reserve contract*, that had its *dispatched* quantity affected by the *dispatch* of *plant* or *scheduled network service* under that *scheduled reserve contract*; and

(ii) who was not the subject of *activation* under an *unscheduled reserve contract*, that had its *dispatched* quantity affected by the *activation* of *generating units* or *loads* under that *unscheduled reserve contract*;

(2) a *Scheduled Generator* or *Scheduled Network Service Provider* whose *plant* or *scheduled network service* was *dispatched* under a *scheduled reserve contract*, that had its *dispatched* quantity for other *generating units* or other services which were not *dispatched* under the *scheduled reserve contract* affected by that *dispatch* of *plant* or *scheduled network service* under that *scheduled reserve contract*, however, the *Scheduled Generator* or *Scheduled Network Service Provider* is only an *Affected Participant* in respect of those *generating units* and services which were not *dispatched* under that *scheduled reserve contract*; or

(3) an *eligible person* entitled to receive an amount from *NEMMCO* pursuant to clause 3.18.1(b)(1) where there has been a change in flow of a *directional interconnector*, for which the *eligible person* holds units for the *intervention price trading interval*, as a result of the *dispatch* of *plant* or *scheduled network service* under a *scheduled reserve contract* or the *activation* of *generating units* or *loads* under an *unscheduled reserve contract*.

agency data collection system

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

agency metering database

A *metering database* which is operated under a service level agreement with *NEMMCO*.

aggregate annual revenue requirement

For *prescribed transmission services*, the meaning in clause 6A.22.1 and for any other service, the calculated total annual revenue to be earned by an entity for a defined class or classes of service.

aggregate payment due

The aggregate of the net amounts payable by *NEMMCO* to each of the *Market Participants* to whom payments are to be made in relation to *spot market transactions* or *reallocation transactions* in respect of a *billing period* determined in accordance with clause 3.15.22(c).

agreed capability

In relation to a *connection point*, the capability to receive or send out power for that *connection point* determined in accordance with the relevant c*onnection agreement*.

alternative control service

A *distribution service* that is a *direct control service* but not a *standard control service*.

Amending Rule

A Rule made by the *AEMC* under section 103 of the *National Electricity Law* on and from the date of commencement of the operation of that Rule, or parts of that Rule.

ancillary service fees

The fees determined by *NEMMCO* under Chapter 2 in relation to *ancillary services*.

ancillary service generating unit

A *generating unit* which has been classified in accordance with Chapter 2 as an *ancillary service generating unit.*

ancillary service load

A *market load* which has been classified in accordance with Chapter 2 as an *ancillary service load.*

ancillary service price

In respect of a *dispatch interval*, for a *market ancillary service*, the common clearing price for the *market ancillary service* determined in accordance with clause 3.9.

Ancillary Service Provider

A person who engages in the activity of owning, controlling or operating a *generating unit* or *market load* classified in accordance with Chapter 2 as an *ancillary service generating unit* or *ancillary service load*, as the case may be.

ancillary services

Market ancillary services and *non-market ancillary services.*

ancillary services agreement

An agreement under which a *Registered Participant* agrees to provide one or more *non-market ancillary services* to *NEMMCO*.

annual building block revenue requirement

The amount representing the revenue requirement of a *Transmission Network Service Provider* for each *regulatory year* of a *regulatory control period* calculated in accordance with clause 6A.5.4.

annual national transmission review or **ANTS review**

The review conducted by *NEMMCO* in accordance with clause 5.6.5.

Annual National Transmission Statement or **ANTS**

The statement *published* by *NEMMCO* in accordance with clause 5.6.5.

Annual Planning Report

A report prepared by a *Transmission Network Service Provider* under clause 5.6.2A(a).

annual revenue requirement

An amount representing revenue for a *Distribution Network Service Provider*, for each *regulatory year* of a *regulatory control period*, calculated in accordance with Part C of Chapter 6.

annual service revenue requirement

Has the meaning set out in clause 6A.22.2.

apparent power

The square root of the sum of the squares of the *active power* and the *reactive power*.

applicable regulatory instruments

All laws, regulations, orders, licences, codes, determinations and other regulatory instruments (other than the *Rules*) which apply to *Registered Participants* from time to time, including those applicable in each *participating jurisdiction* as listed below, to the extent that they regulate or contain terms and conditions relating to access to a *network*, *connection* to a *network*, the provision of *network services*, *network service* price or *augmentation* of a *network*.

(1) New South Wales:

(a) the Electricity Supply Act 1995 ("ES Act");
(b) all regulations made and licences ("Licences") issued under the ES Act;
(c) the Independent Pricing and Regulatory Tribunal Act 1992 ("IPART Act");
(d) all regulations and determinations made under the IPART Act;
(e) all regulatory instruments applicable under the Licences; and
(f) the Commercial Arbitration Act 1984.

(2) Victoria:

(a) the Electricity Industry Act 2000 ("EI Act");
(b) all regulations made and licences ("Licences") issued under the EI Act;
(c) the Essential Services Commission Act 2001 ("ESCV Act");
(d) all regulations and determinations made under the ESCV Act;
(e) all regulatory instruments applicable under the Licences; and
(f) the Tariff Order made under section 158A(1) of the Electricity Industry Act 1993 and continued in effect by clause 6(1) of Schedule 4 to the Electricity Industry (Residual Provisions) Act 1993, as amended or varied in accordance with section 14 of the EI Act.

(3) South Australia:

(a) the Electricity Act 1996;
(b) all regulations made and licences ("Licences") issued under the Electricity Act;
(c) the Essential Services Commission Act 2002 ("ESCSA Act");
(d) all regulations and determinations made under the ESCSA Act;
(e) all regulatory instruments applicable under the Licences; and
(f) the Electricity Pricing Order made under section 35B of the Electricity Act.

(4) Australian Capital Territory:

(a) the Utilities Act 2000;
(b) all regulations made and licences ("Licences") issued under the Utilities Act;
(c) the Independent Competition and Regulatory Commission Act 1997 ("ICRC Act");
(d) all regulations and determinations made under the ICRC Act; and
(e) all regulatory instruments applicable under the Licences.

(5) Queensland:

(a) the Electricity Act 1994;
(b) all regulations made and authorities and special approvals ("Licences") granted under the Electricity Act;
(c) the Queensland Competition Authority Act 1997 ("QCA Act");
(d) all regulations and determinations made under the QCA Act;
(e) all regulatory instruments applicable under the Licences; and
(f) the Gladstone Power Station Agreement Act 1993 and associated agreements.

(6) Tasmania:

(a) the Electricity Supply Industry Act 1995;
(b) all regulations made and licences ("Licences") issued under the Electricity Supply Industry Act;
(c) all regulatory instruments under the Electricity Supply Industry Act or the Licences (including, without limitation, determinations of the Tasmanian Electricity Regulator under the Electricity Supply Industry (Price Control) Regulations); and
(d) the Tasmanian Electricity Code issued under section 49A of the Electricity Supply Industry Act.

application to connect

An application made by a *Connection Applicant* in accordance with clause 5.3 for *connection* to a *network* and/or the provision of *network services* or modification of a *connection* to a *network* and/or the provision of *network services*.

approved pass through amount

In respect of a *positive change event* for a *Transmission Network Service Provider*:

(a) the amount which the *AER* determines should be passed through to *Transmission Network Users* under clause 6A.7.3(d)(2); or

(b) the amount which the *AER* is taken to have determined under clause 6A.7.3(e)(1),

as the case may be.

In respect of a *positive change event* for a *Distribution Network Service Provider*:

(a) the amount the *AER* determines should be passed through to *Distribution Network Users* under clause 6.6.1(d)(2); or

(b) the amount the *AER* is taken to have determined under clause 6.6.1(e)(3),

as the case may be.

approved pricing proposal

A *pricing proposal* approved by the *AER.*

ASRR

The *annual service revenue requirement.*

asynchronous generating unit

A *generating unit* that is not a *synchronous generating unit*.

attributable connection point cost share

Has the meaning set out in clause 6A.22.4.

attributable cost share

Has the meaning set out in clause 6A.22.3.

auction

A *settlement residue* auction held under clause 3.18.

auction amounts

All amounts:

(1) payable to *NEMMCO* or *eligible persons* under *SRD agreements*; or

(2) distributed to *Network Service Providers* under clause 3.18.4; or

(3) recovered by *NEMMCO* under clause 3.18.4 or the *auction rules*.

auction expense fees

The costs and expenses incurred by *NEMMCO* referred to in clause 3.18.4(b).

auction participation agreement

Has the meaning given in clause 3.18.1(a).

auction rules

The rules developed by *NEMMCO* under clause 3.18.3, as amended from time to time in accordance with that clause.

augment, augmentation

Works to enlarge a *network* or to increase the capability of a *network* to transmit or distribute *active energy*.

augmentation technical report

A report by the *Inter-regional Planning Committee* of an *augmentation* under clause 5.6.3(j).

Australian Standard (AS)

The most recent edition of a standard publication by Standards Australia (Standards Association of Australia).

Authority

Any government, government department, instrumentality, *Minister*, agency, statutory authority or other body in which a government has a controlling interest, and includes the *AEMC*, *NEMMCO*, the *AER* and the *ACCC* and their successors.

automatic access standard

In relation to a technical requirement of access, a standard of performance, identified in a schedule of Chapter 5 as an automatic access standard for that technical requirement, such that a *plant* that meets that standard would not be denied access because of that technical requirement.

automatic generation control system (AGC)

The system into which the *loading levels* from economic *dispatch* will be entered for *generating units* operating on automatic generation control in accordance with clause 3.8.21(d).

automatic reclose equipment

In relation to a *transmission line* or *distribution line*, the equipment which automatically recloses the relevant line's circuit breaker(s) following their opening as a result of the detection of a fault in the *transmission line* or the *distribution line* (as the case may be).

available capacity

The total MW capacity available for *dispatch* by a *scheduled generating unit* or *scheduled load* (i.e. maximum plant availability) or, in relation to a specified *price band*, the MW capacity within that *price band* available for dispatch (i.e. availability at each price band).

average electrical energy loss

The volume-weighted average of the *electrical energy losses* incurred in each *trading interval* over all *trading intervals* in a defined period of time

average loss factor

A multiplier used to describe the *average electrical energy loss* for electricity used or transmitted.

avoided Customer TUOS charges

The charges described in rule 5.5(h).

B2B Communications

Communications between *Local Retailers*, *Market Customers* and *Distribution Network Service Providers* relating to an end-user or *supply* to an end-user provided for in the *B2B Procedures*.

B2B Data

Data relating to *B2B Communications*.

B2B Decision

A decision of *NEMMCO* to approve or not approve an *Information Exchange Committee Recommendation*.

B2B Determination Dispute

A dispute in relation to either a *B2B Decision* or an *Information Exchange Committee Recommendation*.

B2B e-Hub

An electronic information exchange platform established by *NEMMCO* to facilitate *B2B Communications*.

B2B Objective

The benefits from *B2B Communications* to *Local Retailers*, *Market Customers* and *Distribution Network Service Providers* as a whole should outweigh the detriments to *Local Retailers*, *Market Customers* and *Distribution Network Service Providers* as a whole.

B2B Principles

The following principles:

(a) *B2B Procedures* should provide a uniform approach to *B2B Communications* in *participating jurisdictions* in which there are no *franchise customers*;

(b) *B2B Procedures* should detail operational and procedural matters and technical requirements that result in efficient, effective and reliable *B2B Communications*;

(c) *B2B Procedures* should avoid unreasonable discrimination between *Local Retailers*, *Market Customers* and *Distribution Network Service Providers*; and

(d) *B2B Procedures* should protect the confidentiality of commercially sensitive information.

B2B Procedures

Procedures prescribing the content of, the processes for, and the information to be provided to support, *B2B Communications*.

B2B Procedures Change Pack

A document consisting of:

(a) a *B2B Proposal*;
(b) a report setting out an overview of the likely impact of the *B2B Proposal* on *NEMMCO*, *Local Retailers*, *Market Customers* and *Distribution Network Service Providers*;
(c) draft *B2B Procedures* (incorporating proposed changes in mark up, where appropriate); and
(d) an issues paper explaining why the *B2B Proposal* is being presented.

B2B Proposal

A proposal for *B2B Procedures*, or a *change* to the *B2B Procedures*, which is the subject of consultation by the *Information Exchange Committee*.

bank bill rate

On any *day*, the rate determined by *NEMMCO* (having regard to such market indicators as *NEMMCO* in its discretion selects) to be the market rate as at 10.00 am on that *day* (or if not a *business day*, on the previous *business day*) for Australian dollar denominated bank accepted bills of exchange having a tenor of 30 *days*.

billing period

The period of 7 *days* commencing at the start of the *trading interval* ending 12.30 am Sunday.

black start capability

A capability that allows a *generating unit*, following its *disconnection* from the *power system*, to be able to deliver electricity to either:

(a) its *connection point*; or

(b) a suitable point in the *network* from which *supply* can be made available to other *generating units*,

without taking *supply* from any part of the *power system* following *disconnection*.

black system

The absence of *voltage* on all or a significant part of the *transmission system* or within a *region* during a *major supply disruption* affecting a significant number of customers.

breaker fail

In relation to a *protection system*, that part of the *protection system* that protects a *Market Participant's facilities* against the non-operation of a circuit breaker that is required to open.

breaker fail protection system

A *protection system* that protects a *facility* against the non-operation of a circuit breaker that is required to open to clear a fault.

building block determination

The component of a distribution determination relevant to the regulation of *standard control services* (See rule 6.3).

building block proposal

For a *Distribution Network Service Provider*, the part of the provider's *regulatory proposal* relevant to the regulation of *standard control services* (See clause 6.3.1).

busbar

A common *connection point* in a *power station switchyard* or a *transmission network substation*.

business day

A *day* other than a Saturday, Sunday or a *day* which is lawfully observed as a national public holiday on the same *day* in each of the *participating jurisdictions*.

call amount

The amount determined pursuant to the formula in clause 3.3.11 for the purposes of a *call notice* where the *outstandings* of a *Market Participant* exceed its *trading limit*.

call notice

A notice issued by *NEMMCO* pursuant to clause 3.3.11 where the *outstandings* of a *Market Participant* exceed its *trading limit*.

capacitor bank

Electrical equipment used to generate *reactive power* and therefore support *voltage* levels on *distribution* and *transmission lines* in periods of high *load*.

capital expenditure criteria

For a *Transmission Network Service Provider* – the matters listed in clause 6A.6.7(c)(1)–(3).

For a *Distribution Network Service Provider* – the matters listed in clause 6.5.7(c)(1)–(3).

capital expenditure factors

For a *Transmission Network Service Provider* – the factors listed in clause 6A.6.7(e)(1)–(10).

For a *Distribution Network Service Provider* – the factors listed in clause 6.5.7(e)(1)–(10).

capital expenditure objectives

For a *Transmission Network Service Provider* – the objectives set out in clause 6A.6.7(a).

For a *Distribution Network Service Provider* – the objectives set out in clause 6.5.7(a).

cascading outage

The occurrence of an uncontrollable succession of *outages*, each of which is initiated by conditions (e.g. instability or overloading) arising or made worse as a result of the event preceding it.

categories of prescribed transmission services

For the purposes of pricing for *prescribed transmission services*:

(a) *prescribed entry services*;

(b) *prescribed exit services*;

(c) *prescribed common transmission services*; and

(d) *prescribed TUOS services*.

central dispatch

The process managed by *NEMMCO* for the *dispatch* of *scheduled generating units, scheduled loads, scheduled network services* and *market ancillary services* in accordance with clause 3.8.

change

Includes amendment, alteration, addition or deletion.

charging parameters

The constituent elements of a tariff.

check meter

A *meter*, other than a *revenue meter*, used as a source of *metering data* for Type 1 and Type 2 *metering installations* as specified in schedule 7.2.

check metering data

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

check metering installation

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

clause 4.8.9 instruction

Has the meaning given in clause 4.8.9(a1)(2).

COAG

Council of Australian Governments.

commercial arbitrator

A dispute resolution panel (within the meaning of section 58 of the *National Electricity Law*) established pursuant to clause 6A.30.2(b).

commitment

The commencement of the process of starting up and *synchronising* a *generating unit* to the *power system*.

common service

A service that ensures the integrity of a *distribution system* and benefits all *Distribution Customers* and cannot reasonably be allocated on a locational basis.

communication link

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

compensation recovery amount

Has the meaning given in clause 3.15.8(a).

complainant

The party which refers a dispute to the *Adviser* in accordance with clause 8.2.5(a).

confidential information

In relation to a *Registered Participant* or *NEMMCO*, information which is or has been provided to that *Registered Participant* or *NEMMCO* under or in connection with the *Rules* and which is stated under the *Rules*, or by *NEMMCO*, the *AER* or the *AEMC*, to be *confidential information* or is otherwise confidential or commercially sensitive. It also includes any information which is derived from such information.

connect, connected, connection

To form a physical link to or through a *transmission network* or *distribution network*.

connection agreement

An agreement between a *Network Service Provider* and a *Registered Participant* or other person by which the *Registered Participant* or other person is *connected* to the *Network Service Provider's transmission* or *distribution network* and/or receives *transmission services* or *distribution services*. In some *participating jurisdictions*, the *Registered Participant* or other person may have one *connection agreement* with a *Network Service Provider* for *connection services* and another agreement with a different *Network Service Provider* for *network services* provided by the *transmission network*.

Connection Applicant

A person who wants to establish or modify *connection* to a *transmission network* or *distribution network* and/or who wishes to receive *network services* and who makes a *connection* enquiry as described in clause 5.3.2.

connection assets

Those components of a *transmission or distribution system* which are used to provide *connection services*.

connection point

The agreed point of *supply* established between *Network Service Provider*(s) and another *Registered Participant*, *Non-Registered Customer* or *franchise customer*.

connection service

An *entry service* (being a service provided to serve a *Generator* or a group of *Generators*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*) or an *exit service* (being a service provided to serve a *Transmission Customer* or *Distribution Customer* or a group of *Transmission Customers* or *Distribution Customers*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*).

considered project

(a) In respect of a *transmission network augmentation*, a project that meets the following criteria:

(1) the *Network Service Provider* has acquired the necessary land and easements;

(2) the *Network Service Provider* has obtained all necessary planning and development approvals;

(3) as applicable:

(i) the *augmentation* project has passed the *regulatory test;*

(ii) in respect of a *new small transmission network asset*, an intention to proceed with the project has been published in the *Network Service Provider's Annual Planning Report*; or

(iii) in respect of a *funded augmentation* the arrangements have been made for its funding; and

(4) construction has either commenced or the *Network Service Provider* has set a firm date for it to commence.

(b) In respect of a *distribution network augmentation*, a project that meets the following criteria:

(1) the *Network Service Provider* has acquired the necessary land and easements;

(2) the *Network Service Provider* has obtained all necessary planning and development approvals; and

(3) construction has either commenced or the *Network Service Provider* has set a firm date for it to commence.

constrained off

In respect of a *generating unit*, the state where, due to a *constraint* on a *network*, the output of that *generating unit* is limited below the level to which it would otherwise have been *dispatched* by *NEMMCO* on the basis of its *dispatch offer*.

constrained on

In respect of a *generating unit*, the state where, due to a *constraint* on a *network*, the output of that *generating unit* is limited above the level to which it would otherwise have been *dispatched* by *NEMMCO* on the basis of its *dispatch offer*.

constraint, constrained

A limitation on the capability of a *network*, *load* or a *generating unit* such that it is unacceptable to either transfer, consume or generate the level of electrical power that would occur if the limitation was removed.

consulting party

The person who is required to comply with the *Rules consultation procedures*.

contestable

(a) In relation to *transmission services* a service which is permitted by the laws of the relevant *participating jurisdiction* to be provided by more than one *Transmission Network Service Provider* as a contestable service or on a competitive basis.

(b) In relation to *distribution services*, a service which is permitted by the laws of the relevant *participating jurisdiction* to be provided by more than one *Distribution Network Service Provider* as a contestable service or on a competitive basis.

contingency capacity reserve

Actual *active* and *reactive energy* capacity, *interruptible load* arrangements and other arrangements organised to be available to be utilised on the actual occurrence of one or more *contingency events* to allow the restoration and maintenance of *power system security*.

contingency capacity reserve standards

The standards set out in the *power system security and reliability standards* to be used by *NEMMCO* to determine the levels of *contingency capacity reserves* necessary for *power system security*.

contingency event

An event described in clause 4.2.3(a).

contingent project

In relation to a *revenue determination*, a *proposed contingent project* that is determined by the *AER*, in accordance with clause 6A.8.1(b), to be a *contingent project* for the purposes of that *revenue determination*.

continuous uninterrupted operation

In respect of a *generating system* or operating *generating unit* operating immediately prior to a *power system* disturbance, not *disconnecting* from the *power system* except under its *performance standards* established under clauses S5.2.5.8 and S5.2.5.9 and, after clearance of any electrical fault that caused the disturbance, only substantially varying its *active power* and *reactive power* required by its *performance standards* established under clauses S5.2.5.11,

S5.2.5.13 and S5.2.5.14, with all essential auxiliary and *reactive plant* remaining in service, and responding so as to not exacerbate or prolong the disturbance or cause a subsequent disturbance for other *connected plant*.

control centre

The *facilities* used by *NEMMCO* for managing *power system security* and administering the *market*.

control system

Means of monitoring and controlling the operation of the *power system* or equipment including *generating units connected* to a *transmission* or *distribution network*.

Convener

The *representative* appointed by *NEMMCO* in accordance with clause 5.6.3 to convene the *Inter-regional Planning Committee*.

Co-ordinated Universal Time (UTC)

The time as determined by the International Bureau of Weights and Measures and maintained under section 8AA of the *National Measurement Act.*

Co-ordinating Network Service Provider

A *Network Service Provider* appointed by multiple *Transmission Network Service Providers* to allocate *AARR* in accordance with rule 6A.29.

Cost Allocation Guidelines

For a *Transmission Network Service Provider* – the guidelines referred to in clause 6A.19.3.

For a *Distribution Network Service Provider* – the guidelines referred to in clause 6.15.3.

Cost Allocation Method

For a *Distribution Network Service Provider*, the Cost Allocation Method approved by the *AER* for that *Distribution Network Service Provider* under clause 6.15.4(c) and (d) as amended from time to time in accordance with clause 6.15.4(f) and (g).

Cost Allocation Methodology

For a *Transmission Network Service Provider*, the Cost Allocation Methodology approved or taken to be approved by the *AER* for that *Transmission Network Service Provider* under clauses 6A.19.4(c) and (d) as amended from time to time in accordance with clauses 6A.19.4(f) and (g).

Cost Allocation Principles

For a *Transmission Network Service Provider* – the principles set out in clause 6A.19.2.

For a *Distribution Network Service Provider* – the principles set out in clause 6.15.2.

cost reflective network pricing

A cost allocation method which reflects the value of assets used to provide *transmission* or *distribution services* to *Network Users*.

cost reflective network pricing methodology or CRNP methodology or modified CRNP methodology

The cost allocation methodologies described in schedule 6A.3.

CPI

As at a particular time, the Consumer Price Index: All Groups Index Number, weighted average of eight capital cities published by the Australian Bureau of Statistics for the most recent quarter that precedes that particular time and for which the index referred to has been published by the Australian Bureau of Statistics as at that time. If that index ceases to be published or is substantially changed, *CPI* will be such other index as is determined by the *AER* as a suitable benchmark for recording general movements in prices.

credible contingency event

An event described in clause 4.2.3(b), certain examples of which are set out in schedule 5.1.

credit period

The typical period of days over which *maximum credit limit* is calculated in accordance with schedule 3.3.

credit support

An obligation owed to *NEMMCO* by a third party supporting the obligations of a *Market Participant* and having the characteristics required by clause 3.3.2.

credit support provider

The issuing party that assumes obligations to *NEMMCO* pursuant to a *credit support*.

critical single credible contingency event

An event described in clause 4.2.3(d).

cumulative price threshold

The threshold for imposition of an *administered price cap* as defined in clause 3.14.1.

current rating

The maximum current that may be permitted to flow (under defined conditions) through a *transmission line* or *distribution line* or other item of equipment that forms part of a *power system.*

current transformer (CT)

A *transformer* for use with *meters* and/or protection devices in which the current in the secondary winding is, within prescribed error limits, proportional to and in phase with the current in the primary winding.

Customer

A person who:

1. engages in the activity of purchasing electricity *supplied* through a *transmission or distribution system* to a *connection point*; and

2. is registered by *NEMMCO* as a *Customer* under Chapter 2.

Customer transmission use of system, Customer transmission use of system service

A service provided to a *Transmission Network User* for use of the *transmission network* for the conveyance of electricity (including where it has been negotiated in accordance with clause 5.4A(f)(3)) that can be reasonably allocated to a *Transmission Network User* on a locational basis, but does not include *Generator transmission use of system services*.

data collection system

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

data logger

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

day

Unless otherwise specified, the 24 hour period beginning and ending at midnight Eastern Standard Time (EST).

declared NEM project

A project determined to be a declared NEM project under clause 2.11.1(ba) or 2.11.1(bd), for which there is special treatment in the timing of cost recovery.

decommission, decommit

In respect of a *generating unit*, ceasing to generate and *disconnecting* from a *network*.

default dispatch bid

A *dispatch bid* made pursuant to clause 3.8.9.

default dispatch offer

A *dispatch offer* made pursuant to clause 3.8.9.

default event

An event defined as such in clause 3.15.21(a).

default notice

A notice issued by *NEMMCO* pursuant to clause 3.15.21(b)(1).

defaulting Market Participant

A *Market Participant* in relation to which a *default event* has occurred.

delayed lower service

The service of providing, in accordance with the *market ancillary service specification*, the capability of controlling the level of *generation* or *load* associated with a particular *facility* in response to a change in the *frequency* of the *power system* beyond a threshold or in accordance with electronic signals from *NEMMCO* in order to lower that *frequency* to within the *normal operating frequency band*.

delayed raise service

The service of providing, in accordance with the *market ancillary service specification*, the capability of controlling the level of *generation* or *load* associated with a particular *facility* in response to a change in the *frequency* of the *power system* beyond a threshold or in accordance with electronic signals from *NEMMCO* in order to raise that *frequency* to within the *normal operating frequency band.*

delayed response capacity reserve

That part of the *contingency capacity reserve* capable of realisation within 5 minutes of a major *frequency* decline in the *power system* as described further in the *power system security and reliability standards*.

demand based price

A price expressed in dollars per kilowatt per time period or dollars per kilovolt ampere per time period.

demand management incentive scheme

An incentive scheme for certain *Distribution Network Service Providers* developed and *published* by the *AER* under clause 6.6.3.

deprival value

A value ascribed to assets which is the lower of economic value or optimised depreciated replacement value.

derogation

Has the meaning given in the *National Electricity Law.*

de-synchronising/de-synchronisation

The act of *disconnection* of a *generating unit* from the *connection point* with the *power system*, normally under controlled circumstances.

direct control service

A *distribution service* that is a direct control network service within the meaning of section 2B of the Law.

Directed Participant

A *Scheduled Generator*, *Market Generator*, *Scheduled Network Service Provider* or *Market Customer* the subject of a *direction.*

direction

Has the meaning given in clause 4.8.9(a1)(1).

directional interconnector

Has the meaning given in clause 3.18.1(c).

Disclosee

In relation to a *Registered Participant* or *NEMMCO*, a person to whom that *Registered Participant* or *NEMMCO* (as the case may be) discloses *confidential information.*

disconnect, disconnected, disconnection

The operation of switching equipment or other action so as to prevent the flow of electricity at a *connection point*.

dispatch

The act of initiating or enabling all or part of the response specified in a *dispatch bid*, *dispatch offer* or *market ancillary service offer* in respect of a *scheduled generating unit*, a *scheduled load*, a *scheduled network service*, an *ancillary service generating unit* or an *ancillary service load* in accordance with clause 3.8, or a *direction* or operation of capacity the subject of a *scheduled reserve contract* in acccordance with rule 3.20 as appropriate.

dispatch algorithm

The algorithm used to determine *central dispatch* developed by *NEMMCO* in accordance with clause 3.8.1(d).

dispatch bid

A notice submitted by a *Market Participant* to *NEMMCO* relating to the *dispatch* of a *scheduled load* in accordance with clause 3.8.7.

dispatch inflexibility profile

Data which may be provided to *NEMMCO* by *Market Participants*, in accordance with clause 3.8.19, to specify *dispatch inflexibilities* in respect of *scheduled loads* or *scheduled generating units* which are not *slow start generating units*.

dispatch instruction

An instruction given to a *Registered Participant* under clauses 4.9.2, 4.9.2A, 4.9.3 or 4.9.3A.

dispatch interval

A period defined in clause 3.8.21(a1) in which the *dispatch algorithm* is run in accordance with clause 3.8.21(b).

dispatch offer

A *generation dispatch offer* or a *network dispatch offer*.

dispatch offer price

The price submitted by a *Scheduled Generator* or a *Scheduled Network Service Provider* for a *price band* and a *trading interval* in a *dispatch offer*.

dispatch optimisation software

The computer program used by *NEMMCO* for computing the *dispatch algorithm*.

dispatch price

The price determined for each *regional reference node* by the *dispatch algorithm* each time it is run by *NEMMCO*.

dispatched generating unit

A *generating unit* which has received instructions from *NEMMCO* in accordance with a *dispatch* schedule.

dispatched generation

The *generation* which has been *dispatched* as part of *central dispatch.*

dispatched Generator

A *Generator* who has received a *dispatch instruction* from *NEMMCO*.

dispatched load

The *load* which has been *dispatched* as part of *central dispatch.*

dispute management system (or "DMS")

The dispute management system which each *Registered Participant* and *NEMMCO* must adopt in accordance with clause 8.2.3.

dispute resolution panel (or "DRP")

A dispute resolution panel established pursuant to clause 8.2.6A.

distribution

Activities pertaining to a *distribution system* including the conveyance of electricity through that *distribution system*.

distribution consultation procedures

The procedures set out in Part G of Chapter 6.

Distribution Customer

A *Customer, Distribution Network Service Provider, Non-Registered Customer* or *franchise customer* having a *connection point* with a *distribution network*.

distribution line

A power line, including underground cables, that is part of a *distribution network*.

distribution loss factor

An *average loss factor* calculated according to clause 3.6.3.

distribution losses

Electrical energy losses incurred in distributing electricity over a *distribution network.*

distribution network

A *network* which is not a *transmission network*.

distribution network connection point

A *connection point* on a *distribution network*.

Distribution Network Service Provider

A person who engages in the activity of owning, controlling, or operating a *distribution system*.

Distribution Network Service Provider Member

A *Member* appointed to the *Information Exchange Committee* in that membership category as set out in the *Information Exchange Committee Election Procedures*.

Distribution Network User

A *Distribution Customer* or an *Embedded Generator*.

distribution network user access

The *power transfer capability* of the *distribution network* in respect of:

(a) *generating units* or a group of *generating units*; and

(b) *network elements*,

at a *connection point* which has been negotiated in accordance with rule 5.5.

Distribution Ring-Fencing Guidelines

The guidelines developed by the *AER* under clause 6.17.2.

distribution service

A service provided by means of, or in connection with, a *distribution system*.

distribution services access dispute

A dispute referred to in clause 6.22.1.

distribution standard control service revenue

Has the meaning given in rule 6.26(b)(2).

distribution system

A *distribution network*, together with the *connection assets* associated with the *distribution network*, which is connected to another *transmission or distribution system.*

Connection assets on their own do not constitute a *distribution system.*

Distribution System Operator

A person who is responsible, under the *Rules* or otherwise, for controlling or operating any portion of a *distribution system* (including being responsible for directing its operations during *power system* emergencies) and who is registered by *NEMMCO* as a *Distribution System Operator* under Chapter 2.

distribution use of system, distribution use of system service

A service provided to a *Distribution Network User* for use of the *distribution network* for the conveyance of electricity that can be reasonably allocated on a locational and/or *voltage* basis.

DMS

A dispute management system.

DMS Contact

A person appointed by a *Registered Participant* or *NEMMCO* pursuant to its *DMS* to be the first point of contact for the notification of disputes under clause 8.2.

DMS referral notice

A notice served on a *DMS Contact* pursuant to clause 8.2.4(a).

DRP

A *dispute resolution panel*.

dual function asset

Means any part of a *network* owned, operated or controlled by a *Distribution Network Service Provider* which operates between 66 kV and 220 kV and which operates in parallel, and provides support, to the higher voltage *transmission network* which is deemed by clause 6.24.2(a) to be a *dual function asset*. For the avoidance of doubt:

(a) a *dual function asset* can only be an asset which forms part of a *network* that is predominantly a *distribution network*; and

(b) an asset which forms part of a *network* which is predominantly a *transmission network* cannot be characterised as a *dual function asset*,

through the operation of clause 6.24.2(a).

dynamic performance

The response and behaviour of *networks* and *facilities* which are *connected* to the *networks* when the *satisfactory operating state* of the *power system* is disturbed.

EAAP guidelines

The guidelines *published* by *NEMMCO* in accordance with clause 3.7C(k) that *NEMMCO* must comply with in preparing the *EAAP*.

EAAP principles

The principles referred to in clause 3.7C(b) that *NEMMCO* must comply with in preparing the *EAAP* and the *EAAP guidelines*.

Eastern Standard Time (EST)

The time which is set at 10 hours in advance of *Co-ordinated Universal Time*.

efficiency benefit sharing scheme

For a *Transmission Network Service Provider* – a scheme developed and *published* by the *AER* under clause 6A.5.

For a *Distribution Network Service Provider* – a scheme developed and *published* by the *AER* under clause 6.5.8.

efficiency benefit sharing scheme parameters

For an *efficiency benefit sharing scheme*, those parameters that are *published* by the *AER* in respect of that scheme pursuant to clause 6A.6.5(c).

electrical energy loss

Energy loss incurred in the production, transportation and/or use of electricity.

electrical sub-network

A part of the *national grid* determined by *NEMMCO* in accordance with clause 3.11.4B.

electronic communication system

Includes the electronic communication and the *electronic data transfer* system provided to *Registered Participants* by *NEMMCO*.

electronic data transfer

The transfer of data by electronic means from one location to another.

eligible pass through amount

In respect of a *positive change event* for a *Transmission Network Service Provider*, the increase in costs in the provision of *prescribed transmission services* that the *Transmission Network Service Provider* has incurred and is likely to incur until the end of the *regulatory control period* as a result of that *positive change event* (as opposed to the revenue impact of that event).

In respect of a *positive change event* for a *Distribution Network Service Provider*, the increase in costs in the provision of *direct control services* that the *Distribution Network Service Provider* has incurred and is likely to incur until the end of the *regulatory control period* as a result of that *positive change event* (as opposed to the revenue impact of that event).

eligible person

Has the meaning given in clause 3.18.2(b).

embedded generating unit

A *generating unit connected* within a *distribution network* and not having direct access to the *transmission network*.

Embedded Generator

A *Generator* who owns, operates or controls an *embedded generating unit*.

enabled

A *market ancillary service* is enabled when *NEMMCO* has selected the relevant *generating unit* or *load* for the provision of the *market ancillary service* and has notified the relevant *Market Participant* accordingly.

enablement limit

In relation to any *market ancillary service offer*, the level of associated *generation* or *load* (in MW) above or below which no response is specified as being available.

enabling price

Has the meaning given in clause 3.8.7A(d).

energise/energisation

The act of operation of switching equipment or the start-up of a *generating unit*, which results in there being a non-zero *voltage* beyond a *connection point* or part of the *transmission* or *distribution network*.

energy

Active energy and/or *reactive energy*.

energy adequacy assessment projection (EAAP)

A projection of *NEMMCO's* assessment of *energy* availability that accounts for *energy constraints* for each month over a 24 month period, which is prepared and *published* in accordance with rule 3.7C and is measured as *unserved energy* for each *region*.

energy based price

A price expressed in cents per kilowatt hour of *energy*.

energy constrained scheduled generating unit

A scheduled generating unit in respect of which the amount of electricity it is capable of *supplying* on a *trading day* is less than the amount of electricity it would *supply* on that *trading day* if it were *dispatched* to its full nominated availability for the whole *trading day*.

energy constrained scheduled load

A *scheduled load* in respect of which the amount of electricity it can take in a *trading day*, if *normally* o*ff*, or it can *off-load*, if *normally on*, is *constrained*.

energy constraint

A limitation on the ability of a *generating unit* or group of *generating units* to generate *active power* due to the restrictions in the availability of fuel or other necessary expendable resources such as, but not limited to, gas, coal, or water for operating turbines or for cooling.

energy conversion model

The model that defines how the *intermittent* input energy source (such as wind) is converted by the *semi-scheduled generating unit* into electrical output. That model must contain the information set out in the guidelines *published* by *NEMMCO* in accordance with clause 2.2.7(d).

energy data

Interval energy data or *accumulated energy data.*

energy data services

The services that involve:

(1) collation of *energy data* from the *meter* or *meter*/associated *data logger*;

(2) the processing of the *energy data* in the *metering installation* database;

(3) storage of the *energy data* in the *metering installation* database; and

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

energy packets

The value of *energy data* which is accumulated for a period of 30 minutes and stored as a separate data record.

energy support arrangement

A contractual arrangement between a *Generator* or *Network Service Provider* on the one hand, and a customer or *participating jurisdiction* on the other, under which *facilities* not subject to an *ancillary services agreement* for the provision of *system restart ancillary services* are used to assist *supply* to a customer during a *major supply disruption* affecting that customer, or customers generally in the *participating jurisdictions*, as the case may be.

entry charge

The charge payable by an *Embedded Generator* to a *Distribution Network Service Provider* for an *entry service* at a *distribution network connection point*.

entry cost

For each *distribution network connection point*, the amount of the *aggregate annual revenue requirement* for all individual assets classified as *entry service* assets which provide *entry service* for the *connection point.*

entry service

A service provided to serve a *Generator* or a group of *Generators*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*.

estimated energy data

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

excess generation

Aggregate *self dispatch level* of *self-committed generation* which is in excess of the quantity needed to meet the expected *power system demand* and *reserve* requirements.

excess generation period

A period made up of one or more *dispatch intervals* where the sum of the aggregate of *generating unit self dispatch levels* and the required *regulating capability* (which forms part of the *contingency capacity reserves standard*) exceeds the forecast *load* or actual *load* during those *dispatch intervals*.

excitation control system

In relation to a *generating unit*, the automatic *control system* that provides the field excitation for the generator of the *generating unit* (including excitation limiting devices and any power system stabiliser).

exit charge

The charge payable by a *Distribution Customer* to a *Distribution Network Service Provider* for *exit service* at a *distribution network connection point*.

exit cost

For each *distribution network connection point*, the amount of the *aggregate annual revenue requirement* for all individual assets classified as *exit service* assets which provide *exit service* for the *connection point.*

exit service

A service provided to serve a *Transmission Customer* or *Distribution Customer* or a group of *Transmission Customers* or *Distribution Customers*, or a *Network Service Provider* or a group of *Network Service Providers*, at a single *connection point*.

extension

An *augmentation* that requires the *connection* of a power line or *facility* outside the present boundaries of the *transmission* or *distribution network* owned, controlled or operated by a *Network Service Provider*.

extreme frequency excursion tolerance limits

In relation to the *frequency* of the *power system*, means the limits so described and specified in the *power system security and reliability standards*.

facilities

A generic term associated with the apparatus, equipment, buildings and necessary associated supporting resources provided at, typically:

(a) a *power station* or *generating unit*;

(b) a *substation* or *power station switchyard*;

(c) a *control centre* (being a *NEMMCO control centre*, or a *distribution* or *transmission network control centre*);

(d) facilities providing an *exit service*.

fast lower service

The service of providing, in accordance with the requirements of the *market ancillary service specification*, the capability of rapidly controlling the level of *generation* or *load* associated with a particular *facility* in response to the locally sensed *frequency* of the *power system* in order to arrest a rise in that *frequency*.

fast raise service

The service of providing, in accordance with the requirements of the *market ancillary service specification*, the capability of rapidly controlling the level of *generation* or *load* associated with a particular *facility* in response to the locally sensed *frequency* of the *power system* in order to arrest a fall in that *frequency*.

fault clearance time

In respect of a *fault type*, the time within which the *protection system* is designed, operated and maintained to clear a *short circuit fault* of that *fault type* within its protection zone.

fault type

One of the following types of electrical fault:

(a) three phase to ground fault;

(b) three phase fault;

(c) two phase to ground fault;

(d) phase to phase fault; and

(e) one phase to ground fault.

final statement

A statement issued by *NEMMCO* under clause 3.15.15 to a *Market Participant*.

financial year

A period commencing on 1 July in one calendar year and terminating on 30 June in the following calendar year.

financially responsible

In relation to any *market connection point*, a term which is used to describe the *Market Participant* which has either:

1. classified the *connection point* as one of its *market loads*;

2. classified the *generating unit connected* at that *connection point* as a *market generating unit;* or

3. classified the *network services* at that *connection point* as a *market network service.*

First-Tier Customer

A *Customer* which has classified any *load* as a *first-tier load* in accordance with Chapter 2.

first-tier load

Electricity purchased at a *connection point* directly and in its entirety from the *Local Retailer* and which is classified as a *first-tier load* in accordance with Chapter 2.

framework and approach paper

A document prepared and issued as a framework and approach paper under clause 6.8.1.

franchise customer

A person who does not meet its local jurisdiction requirements to make it eligible to be registered by *NEMMCO* as a *Customer* for a *load*.

frequency

For alternating current electricity, the number of cycles occurring in each second. The term Hertz (Hz) corresponds to cycles per second.

frequency operating standards

The standards which specify the *frequency* levels for the operation of the *power system* set out in the *power system security and reliability standards*.

frequency response mode

The mode of operation of a *generating unit* which allows automatic changes to the generated power when the *frequency* of the *power system* changes.

funded augmentation

A *transmission network augmentation* for which the *Transmission Network Service Provider* is not entitled to receive a charge pursuant to Chapter 6.

GELF parameters

Variable parameters specific to a *Generator Energy Limitation Framework (GELF)* which are defined in the *EAAP guidelines* and supplement the *GELF*, and are submitted by a *Scheduled Generator* and updated in accordance with rule 3.7C for the purpose of the *EAAP*.

general purpose

The term applied by the National Measurement Institute to refer to the classification of a *meter*.

generated

In relation to a *generating unit*, the amount of electricity produced by the *generating unit* as measured at its terminals.

generating plant

In relation to a *connection point*, includes all equipment involved in generating electrical *energy*.

generating system

(a) Subject to paragraph (b), for the purposes of the *Rules*, a system comprising one or more *generating units*.

(b) For the purposes of clause 2.2.1(e)(3), clause 4.9.2, Chapter 5 and a *jurisdictional derogation* from Chapter 5, a system comprising one or more *generating units* and includes auxiliary or *reactive plant* that is located on the *Generator's* side of the *connection point* and is necessary for the *generating system* to meet its *performance standards*.

Generating System Design Data Sheet

The data sheet *published* by *NEMMCO* under clause S5.5.7(a)(1).

Generating System Model Guidelines

The guidelines *published* by *NEMMCO* under clause S5.5.7(a)(3).

Generating System Setting Data Sheet

The data sheet *published* by *NEMMCO* under clause S5.5.7(a)(2).

generating unit

The actual generator of electricity and all the related equipment essential to its functioning as a single entity.

generation

The production of electrical power by converting another form of energy in a *generating unit*.

generation centre

A geographically concentrated area containing a *generating unit* or *generating units* with significant combined generating capability.

generation dispatch offer

A notice submitted by a *Scheduled Generator* to *NEMMCO* relating to the *dispatch* of a *scheduled generating unit* in accordance with clause 3.8.6.

Generator

A person who engages in the activity of owning, controlling or operating a *generating system* that is *connected* to, or who otherwise *supplies* electricity to, a *transmission* or *distribution system* and who is registered by *NEMMCO* as a

Generator under Chapter 2 and, for the purposes of Chapter 5, the term includes a person who is required to, or intends to register in that capacity.

Generator Energy Limitation Framework (GELF)

A description of the *energy constraints* that affect the ability of a *scheduled generating unit* to generate electricity prepared in accordance with the *EAAP guidelines*.

Generator transmission use of system, Generator transmission use of system service

A service provided to a *Generator* for:

(a) use of the *transmission network* which has been negotiated in accordance with clause 5.4A(f)(3)(i); or

(b) use of a *new transmission network investment* asset for the conveyance of electricity that can be reasonably allocated to a *Generator* on a locational basis.

global market ancillary service requirement

Has the meaning given to it by clause 3.8.1(e2).

good electricity industry practice

The exercise of that degree of skill, diligence, prudence and foresight that reasonably would be expected from a significant proportion of operators of *facilities* forming part of the *power system* for the *generation*, *transmission* or *supply* of electricity under conditions comparable to those applicable to the relevant *facility* consistent with *applicable regulatory instruments*, *reliability*, safety and environmental protection. The determination of comparable conditions is to take into account factors such as the relative size, duty, age and technological status of the relevant *facility* and the *applicable regulatory instruments*.

governor system

The automatic *control system* which regulates the speed of the power turbine of a *generating unit* through the control of the rate of entry into the *generating unit* of the primary *energy* input (for example, steam, gas or water).

hedge contract

A contract between two or more parties affording one or each of them protection against certain financial risks.

high voltage (HV)

A *voltage* greater than 1 kV.

Independent Member

A *Member* appointed to the *Information Exchange Committee* in that membership category as set out in the *Information Exchange Committee Election Procedures*.

independent person

A person who:

(a) is not a member, employee or member of staff of the *AER* or the *AEMC*;

(b) is not a director or employee of *NEMMCO*;

(c) is not a director or employee of, or partner in, a *Registered Participant*;

(d) does not have a direct or indirect financial interest (whether as shareholder, partner or other equity participant) in any *Registered Participant* or a *related body corporate* of any *Registered Participant*, other than an interest of less than 0.1% of the net shareholders funds of that entity (as determined at the date the relevant person is appointed to carry out a function under the *Rules*); or

(e) is not a director or employee of a *related body corporate* of any *Registered Participant*.

independently controllable two-terminal link

A *two-terminal link* through which the *power transfer* can be independently controlled within a range determined by the *power transfer capability* of the *two-terminal link* and the conditions prevailing in the rest of the *power system.*

indexed amount

As at any time and in relation to a dollar value that is expressly set out in Part C of Chapter 6 or Part C of Chapter 6A, that dollar value multiplied by CPI_a/CPI_b

where:

CPI_a is the *CPI* as at that time; and

CPI_b is the Consumer Price Index: All Groups Index Number, weighted average of eight capital cities published by the Australian Bureau of Statistics for the quarter ending 30 June 2006.

inflexible, inflexibility

In respect of a *scheduled generating unit, scheduled load* or *scheduled network service* for a *trading interval* means that the *scheduled generating unit, scheduled load* or *scheduled network service* is only able to be *dispatched* in the *trading interval* at a fixed *loading level* specified in accordance with clause 3.8.19(a).

Information Exchange Committee

The committee established under clause 7.2A.2(a).

Information Exchange Committee Annual Report

The annual report prepared by the *Information Exchange Committee* in accordance with the *Information Exchange Committee Operating Manual*.

Information Exchange Committee Election Procedures

The procedures of that title which set out the process for election of *Members.*

Information Exchange Committee Operating Manual

The manual of that title prepared by the *Information Exchange Committee* which sets out the processes pursuant to which the *Information Exchange Committee* operates.

Information Exchange Committee Recommendation

A recommendation made by the *Information Exchange Committee* to *NEMMCO* to make *B2B Procedures* or to *change* the *B2B Procedures*.

Information Exchange Committee Working Groups

The groups established by the *Information Exchange Committee* to assist with the *Information Exchange Committee Works Programme*.

Information Exchange Committee Works Programme

The work programme prepared by the *Information Exchange Committee* in respect of the development, implementation and operation of the *B2B Procedures* and other matters which are incidental to effective and efficient *B2B Communications*.

information guidelines

Guidelines made by the *AER* for the purpose of guiding a *Transmission Network Service Provider* in the submission of certified annual statements and other related information in accordance with clause 6A.17.2.

instrument transformer

Either a *current transformer* (*CT*) or a *voltage transformer* (*VT*).

insurance event

An event for which the risk of its occurrence is the subject of insurance taken out by or for a *Transmission Network Service Provider*, for which an allowance is provided in the *total revenue cap* for the *Transmission Network Service Provider* and in respect of which:

(a) the cost of the premium paid or required to be paid by the *Transmission Network Service Provider* in the *regulatory year* in which the cost of the premium changes is higher or lower than the premium that is provided for in the *maximum allowed revenue* for the provider for that *regulatory year* by an amount of more than 1% of the *maximum allowed revenue* for the provider for that *regulatory year*;

(b) the risk eventuates and, as a consequence, the *Transmission Network Service Provider* incurs or will incur all or part of a deductible where the amount so incurred or to be so incurred in a *regulatory year* is higher or lower than the allowance for the deductible (if any) that is provided for in the *maximum allowed revenue* for the provider for that *regulatory year* by an amount of more than 1% of the *maximum allowed revenue* for the provider for that *regulatory year*;

(c) insurance becomes unavailable to the *Transmission Network Service Provider*; or

(d) insurance becomes available to the *Transmission Network Service Provider* on terms materially different to those existing as at the time the *revenue determination* was made (other than as a result of any act or omission of the provider which is inconsistent with good electricity industry practice).

intending load

A proposed purchase of electricity at a *connection point* (the location of which may be undefined) which is classified as an *intending load* in accordance with Chapter 2.

Intending Participant

A person who is registered by *NEMMCO* as an *Intending Participant* under Chapter 2.

interconnection, interconnector, interconnect, interconnected

A *transmission line* or group of *transmission lines* that *connects* the *transmission networks* in adjacent *regions*.

interconnector flow

The quantity of electricity in MW being transmitted by an *interconnector*.

interested party

1. In Chapter 5, a person including an end user or its *representative* who, in *NEMMCO*'s opinion, has or identifies itself to *NEMMCO* as having an interest in relation to the *network* planning and development activities covered under clause 5.6 or in the determination of *plant standards* covered under clause 5.3.3(b2).

1A. Notwithstanding the definition in 1. above, in clause 5.6.6(j), a person including an end user or its *representative* who, in the *AER's* opinion, has or identifies itself to the *AER* as having, the potential to suffer a material and adverse market impact from the *new large transmission network asset* identified in the clause 5.6.6(j) final report.

2. In Chapter 6 or Chapter 6A, a person (not being a *Registered Participant* or *NEMMCO*) that has, in the *AER's* opinion, or identifies itself to the *AER* as having, an interest in the *Transmission Ring-Fencing Guidelines* or the *Distribution Ring-Fencing Guidelines*.

3. [**Deleted**]

4. In Chapter 2, a person including an end user or its *representative* who, in *NEMMCO's* opinion, has or identifies itself to *NEMMCO* as having an interest in relation to the structure of *Participant Fees.*

interim statement

Has the meaning given in clause 3.3.11(a)(1).

intermediary

A person who is registered by *NEMMCO* as a *Generator* or a *Network Service Provider* instead of another person who, in the absence of an exemption under clause 2.9.3, would be required to be registered as such under the *Rules*.

intermittent

A description of a *generating unit* whose output is not readily predictable, including, without limitation, solar generators, wave turbine generators, wind turbine generators and hydro-generators without any material storage capability.

inter-network test

A test conducted for the purpose of verifying the magnitude of the *power transfer capability* of more than one *transmission network* in accordance with clause 5.7.7.

inter-network testing constraint

A *constraint* on a *transmission network* as contemplated by clause 5.7.7.

inter-regional

Between *regions*.

inter-regional loss factor

A *marginal loss factor* determined according to clause 3.6.1.

inter-regional losses

Has the meaning given to it by clause 3.6.1(a).

inter-regional network constraint

A *constraint* on the *transmission* and/or *distribution networks* between *regions* as specified in clause 3.6.4(a).

Inter-regional Planning Committee

The committee established in accordance with clause 5.6.3.

interruptible load

A *load* which is able to be *disconnected*, either manually or automatically initiated, which is provided for the restoration or control of the *power system frequency* by *NEMMCO* to cater for *contingency events* or shortages of *supply*.

interval energy data

The data that results from the measurement of the flow of electricity in a power conductor where the data is prepared by a *data logger* into intervals which correspond to a *trading interval* or are sub-multiples of a *trading interval.*

intervention price dispatch interval

A *dispatch interval* declared by *NEMMCO* to be an *intervention price dispatch interval* in accordance with clause 3.9.3.

intervention price trading interval

A *trading interval* in which *NEMMCO* has declared an *intervention price dispatch interval* in accordance with clause 3.9.3.

intervention settlement timetable

Has the meaning given in clause 3.12.1(b).

intra-regional

Within a *region*.

intra-regional loss factor

A *marginal loss factor* determined according to clause 3.6.2.

intra-regional losses

Has the meaning given to it by clause 3.6.2(a).

intra-regional network constraint

A *constraint* on part of the *transmission* and *distribution networks* within a *region* as specified in clause 3.6.4(b).

invoiced amount

The aggregate of the *settlement statements, interim, preliminary* or *final*, which at the time of issue of a *call notice* are unpaid by the *Market Participant*, notwithstanding that the usual time for issue or payment of those *settlement statements* has not been reached.

involuntary load shedding

Load shedding where the load shed is not an *interruptible load* or a *scheduled load*.

isolation

Electrical isolation of one part of a communication system from another but where the passage of *electronic data transfer* is not prevented.

Jurisdictional System Security Coordinator

A person appointed by the *Minister* of a *participating jurisdiction* in accordance with section 110 of the *National Electricity Law*.

jurisdictional derogation

Has the meaning given in the *National Electricity Law*. The jurisdictional derogations are included in Chapter 9.

jurisdictional electricity legislation

Has the meaning given to that term in the *National Electricity Law*.

jurisdictional metrology material

Jurisdictional metrology matters that are to be included in the *metrology procedure* for one or more of the *participating jurisdictions* and which is submitted by the *Ministers of the MCE* to *NEMMCO* under clause 7.14.2.

Jurisdictional NMI Standing Data schedule

The schedules described in clause 3.13.12(a), as amended from time to time in accordance with clause 3.13.12(b).

Jurisdictional NMI Standing Data suppliers

Registered Participants which are required by the relevant *participating jurisdiction's* legislation or licensing requirements to supply *NMI Standing Data* in respect of *connection points* in that *participating jurisdiction* to *NEMMCO*.

Jurisdictional Regulator

The person authorised by a *participating jurisdiction* to regulate *distribution service* prices in that jurisdiction.

lack of reserve (LOR)

Any of the conditions described in clause 4.8.4(b), (c) or (d).

last resort planning power

The *AEMC's* power to direct a *Registered Participant* under clause 5.6.4(c).

last resort planning power guidelines

The guidelines made by the *AEMC* relating to the exercise of the *last resort planning power* and referred to in clause 5.6.4(o)-(r).

load

A *connection point* or defined set of *connection points* at which electrical power is delivered to a person or to another *network* or the amount of electrical power delivered at a defined instant at a *connection point*, or aggregated over a defined set of *connection points.*

load centre

A geographically concentrated area containing *load* or *loads* with a significant combined consumption capability.

load class

A grouping of customers with like *load* characteristics.

load shedding

Reducing or disconnecting *load* from the *power system*.

load shedding procedures

The procedures developed by *NEMMCO* for each *participating jurisdiction* in accordance with clause 4.3.2(h) for the implementation of the *load shedding* priority and *sensitive load* priority advised by that *Jurisdictional System Security Coordinator* under clauses 4.3.2(f)(1) and (2).

loading level

The level of output, consumption or power flow (in MW) of a *generating unit, load* or *scheduled network service*.

loading price

The price specified for a *price band* and a *trading interval* in a *dispatch offer*, in accordance with clause 3.8.6, for the *dispatch* of a *scheduled generating unit* at a level above its *self-dispatch level.*

local area/local

The geographical area allocated to a *Network Service Provider* by the authority responsible for administering the *jurisdictional electricity legislation* in the relevant *participating jurisdiction.*

local black system procedures

The procedures, described in clause 4.8.12, applicable to a *local area* as approved by *NEMMCO* from time to time.

local market ancillary service requirement

Has the meaning given to it by clause 3.8.1(e2).

Local Network Service Provider

Within a *local area*, a *Network Service Provider* to which that geographical area has been allocated by the authority responsible for administering the *jurisdictional electricity legislation* in the relevant *participating jurisdiction.*

Local Retailer

In relation to a *local area*, the *Customer* who is:

1. a business unit or *related body corporate* of the relevant *Local Network Service Provider*; or

2. responsible under the laws of the relevant *participating jurisdiction* for the *supply* of electricity to *franchise customers* in that *local area*; or

3. if neither 1 or 2 is applicable, such other *Customer* as *NEMMCO* may determine.

Local Retailer/Market Customer Member

A *Member* appointed to the *Information Exchange Committee* in that membership category as set out in the *Information Exchange Committee Election Procedures*.

local spot price

A price determined according to clause 3.9.1(c).

loss factor

A multiplier used to describe the *electrical energy loss* for electricity used or transmitted.

low reserve

The conditions described in clause 4.8.4(a).

major supply disruption

The unplanned absence of *voltage* on a part of the *transmission system* affecting one or more *power stations*.

mandatory restrictions

Restrictions imposed by a *participating jurisdiction* by a relevant law, other than the *Rules*, on the use of electricity in a *regio*n.

mandatory restriction period

The period of *mandatory restriction*s.

mandatory restriction schedule

A schedule prepared in accordance with clause 3.12A.2.

marginal electrical energy loss

The *electrical energy loss* associated with an infinitesimal increment in electricity produced, transported and/or used.

marginal loss factor

A multiplier used to describe the *marginal electrical energy loss* for electricity used or transmitted.

market

Any of the markets or exchanges described in the *Rules*, for so long as the market or exchange is conducted by *NEMMCO*.

market ancillary service

A service identified in clause 3.11.2(a).

market ancillary service offer

A notice submitted by an *Ancillary Service Provider* to *NEMMCO* in respect of a *market ancillary service* in accordance with clause 3.8.7A.

market ancillary service specification

Has the meaning given in clause 3.11.2(b).

market ancillary services commencement date

29 September 2001.

market auditor

A person appointed by *NEMMCO* to carry out a *review* under clause 3.13.10(a).

market commencement

The date declared as such by *NEMMCO*, on which trading in the *market* commences.

market connection point

A *connection point* where any *load* is classified in accordance with Chapter 2 as a *market load* or which *connects* any *market generating unit* to the *national grid*, or where the *network service connected* at that *connection point* is a *market network service*.

Market Customer

A *Customer* who has classified any of its *loads* as a *market load* and who is also registered by *NEMMCO* as a *Market Customer* under Chapter 2.

market customer's additional claim

Has the meaning given in clause 3.12.2(g)(4).

market floor price

A price floor on *regional reference prices* as described in clause 3.9.6.

market generating unit

A *generating unit* whose *sent out generation* is not purchased in its entirety by the *Local Retailer* or by a *Customer* located at the same *connection point* and which has been classified as such in accordance with Chapter 2.

Market Generator

A *Generator* who has classified at least one *generating unit* as a *market generating unit* in accordance with Chapter 2 and who is also registered by *NEMMCO* as a *Market Generator* under Chapter 2.

market information

Information, other than *confidential information*, concerning the operation of the *spot market* or relating to the operation of, inputs to, or outputs from the *central dispatch* process.

market information bulletin board

A facility established by *NEMMCO* on the *electronic communication system* for the posting of information which may then be available to *Registered Participants*.

market load

A *load* at a *connection point* the electricity relating to which is purchased other than from the *Local Retailer* and which is classified by the person *connected* at that *connection point* or, with the consent of that person, by some other person, as a *market load* in accordance with Chapter 2. There can be more than one *market load* at any one *connection point.*

market management systems

NEMMCO's market information systems and associated communications networks used to support the electronic communication by *Registered Participants* and others connected to or making use of the systems and networks in the operation of the *market*.

Market Management Systems Access Procedures

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

market network service

A *network service* which is classified as a *market network service* in accordance with clause 2.5.2.

Market Network Service Provider

A *Network Service Provider* who has classified any of its *network services* as a *market network service* in accordance with Chapter 2 and who is also registered by *NEMMCO* as a *Market Network Service Provider* under Chapter 2.

Market Participant

A person who is registered by *NEMMCO* as a *Market Generator*, *Market Customer* or *Market Network Service Provider* under Chapter 2.

Market Participant registered data

The data kept on the register in accordance with schedule 5.5.

Market Settlement and Transfer Solution Procedures

The procedures from time to time *published* by *NEMMCO* under clause 7.2.8 which include those governing the recording of financial responsibility for *energy* flows at a *connection point*, the transfer of that responsibility between *Market Participants* and the recording of *energy* flows at a *connection point*.

market suspension

Suspension of the *market* by *NEMMCO* in accordance with clause 3.14.3.

material inter-network impact

A material impact on another *Transmission Network Service Provider's network*, which impact may include (without limitation):

(a) the imposition of *power transfer constraints* within another *Transmission Network Service Provider's network*; or

(b) an adverse impact on the quality of *supply* in another *Transmission Network Service Provider's network*.

materially

For the purposes of the application of clause 6A.7.3, an event (other than a *network support event*) results in a *Transmission Network Service Provider* incurring materially higher or materially lower costs if the change in costs (as opposed to the revenue impact) that the *Transmission Network Service Provider* has incurred and is likely to incur in any *regulatory year* of the *regulatory control period*, as a result of that event, exceeds 1% of the *maximum allowed revenue* for the *Transmission Network Service Provider* for that *regulatory year*. In other contexts, the word has its ordinary meaning.

maximum allowed revenue

For a *Transmission Network Service Provider* for a *regulatory year* of a *regulatory control period*, the amount calculated as such in accordance with rule 6A.3.

maximum credit limit

In relation to a *Market Participant* a credit limit determined by *NEMMCO* for that *Market Participant* in accordance with clause 3.3.8.

maximum demand

The highest amount of electrical power delivered, or forecast to be delivered, over a defined period (*day*, week, month, season or year) either at a *connection point*, or simultaneously at a defined set of *connection points*.

maximum power input (MPI)

The largest single *supply* input to a particular location or *region*, typically the output of the largest single *generating unit* or group of *generating units* or the highest *power transfer* of a single *transmission line* or *interconnection*.

maximum total payment

The amount determined in accordance with clause 3.15.22.

measurement element

An energy measuring component which converts the flow of electricity in a power conductor into an electronic signal and / or a mechanically recorded electrical measurement.

medium term capacity reserve

At any time, the amount of surplus generating capacity indicated by the relevant *Generators* as being available for a particular period, being more than 7 *days* in the future but not more than 12 weeks, and which is assessed as being in excess of

the capacity requirement to meet the forecast *load* demand, taking into account the known or historical levels of demand management.

medium term capacity reserve standard

The level of *medium term capacity reserves* required for a particular period as set out in the *power system security and reliability standards*.

medium-term PASA

The PASA in respect of the period from the 8th *day* after the current *trading day* to 24 months after the current *trading day* in accordance with clause 3.7.2.

Member

A person appointed to the *Information Exchange Committee* pursuant to the *Information Exchange Committee Election Procedures*, and includes all membership categories, unless a contrary intention appears.

meter

A device complying with *Australian Standards* which measures and records the production or consumption of electrical *energy*.

metering

Recording the production or consumption of electrical *energy*.

metering data

The data obtained from a *metering installation*, the processed data or substituted data.

metering database

A database of *metering data* and *settlements ready data* maintained and administered by *NEMMCO* in accordance with clause 7.9.

metering installation

The assembly of components and/or processes that are controlled for the purpose of metrology and which lie between the *metering point(s)* or *unmetered connection point* and the point of connection to the *telecommunications network*, as shown in schedule 7.1.

[**Note:** The assembly of components may include the combination of several metering points to derive the metering data for a connection point. The metering installation must be classified as a revenue metering installation and/or a check metering installation.]

metering point

The point of physical connection of the device measuring the current in the power conductor.

Metering Provider

A person who meets the requirements listed in schedule 7.4 and has been accredited by and registered by *NEMMCO* as a Metering Provider.

metering register

A register of information associated with a *metering installation* as required by schedule 7.5.

metering system

The collection of all components and arrangements installed or existing between each *metering point* and the *metering database*, as shown in schedule 7.1 .

metrology procedure

The procedure developed and published by *NEMMCO* in accordance with rule 7.14.

minimum access standard

In relation to a technical requirement of access, a standard of performance, identified in a schedule of Chapter 5 as a minimum access standard for that technical requirement, such that a *plant* that does not meet that standard will be denied access because of that technical requirement.

minimum technical ancillary service standards

The minimum technical service standards prepared by *NEMMCO* in accordance with clause 3.11.4.

Minister

A Minister that is a "Minister" under the *National Electricity Law*.

Minister of (a, that, another, or other, etc) participating jurisdiction

Has the same meaning as Minister of a participating jurisdiction has in the *National Electricity Law*.

Ministers of the MCE

Ministers of the participating jurisdictions acting as the MCE where MCE has the same meaning as in the *National Electricity Law*.

monitoring equipment

The testing instruments and devices used to record the performance of *plant* for comparison with expected performance.

month

Unless otherwise specified, the period beginning at 4.30 am on the relevant commencement date and ending at 4.30 am on the date in the next calendar month corresponding to the commencement date of the period.

nameplate rating

The maximum continuous output or consumption in MW of an item of equipment as specified by the manufacturer, or as subsequently modified.

NATA

National Association of Testing Authorities.

National Electricity Code

Has the same meaning as in the *National Electricity Law*.

National Electricity Law

The National Electricity Law set out in the schedule to the National Electricity (South Australia) Act 1996 (SA) and applied in each of the *participating jurisdictions.*

National Electricity Market

Has the same meaning as in the *National Electricity Law.*

national electricity objective

The objective stated in section 7 of the Law.

national grid

The sum of all *connected transmission systems* and *distribution systems* within the *participating jurisdictions*.

National Measurement Act

The National Measurement Act 1960 of the Commonwealth as amended from time to time.

national transmission flow path

That portion of a *transmission network* or *transmission networks* used to transport significant amounts of electricity between *generation centres* and *load centres.*

NCAS

A *network control ancillary service*.

negative change event

For a *Transmission Network Service Provider*, a *pass through event* which entails the *Transmission Network Service Provider* incurring *materially* lower costs in providing *prescribed transmission services* than it would have incurred but for that event.

For a *Distribution Network Service Provider*, a *pass through event* that materially reduces the costs of providing *direct control services*.

negative network support event

A *network support event* which entails a *Transmission Network Service Provider* making lower *network support payments* in the preceding *regulatory year* than the amount of *network support payments* (if any) that is provided for in the *annual building block revenue requirement* for the provider for that *regulatory year*.

negative pass through amount

In respect of a *negative change event* for a *Transmission Network Service Provider*, an amount that is not greater than a *required pass through amount* as determined by the *AER* under clause 6A.7.3(g).

In respect of a *negative change event* for a *Distribution Network Service Provider*, an amount that is not greater than a *required pass through amount* as determined by the *AER* under clause 6.6.1(g).

negotiable service

(a) In relation to *transmission services* means *negotiated transmission services*.

(b) In relation to *distribution services* means *negotiated distribution services*.

negotiated access standard

In relation to a technical requirement of access for a particular *plant*, an agreed standard of performance determined in accordance with clause 5.3.4A and identified as a negotiated access standard for that technical requirement in a *connection agreement*.

negotiated distribution service

A *distribution service* that is a *negotiated network service* within the meaning of section 2C of the Law;

Negotiated Distribution Service Criteria

The criteria specified in a distribution determination in accordance with clause 6.7.4.

Negotiated Distribution Service Principles

The principles set out in clause 6.7.1.

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*; or

(c) *use of system services* provided to a *Transmission Network User* and referred to in rule 5.4A(f)(3) in relation to *augmentations* or *extensions* required to be undertaken on a *transmission network* as described in rule 5.4A,

but does not include an *above-standard system shared transmission service* or a *market network service*.

Negotiated Transmission Service Criteria

For a *Transmission Network Service Provider* under a *transmission determination*, the criteria set out in that *transmission determination* pursuant to clause 6A.9.4.

Negotiated Transmission Service Principles

The principles set out in clause 6A.9.1.

negotiated use of system service

A *use of system service* in respect of which:

(a) a *Connection Applicant* may negotiate with a *Transmission Network Service Provider*;

(b) an *Embedded Generator* may negotiate with a *Distribution Network Service Provider*; or

(c) a *Market Network Service Provider* may negotiate with a *Distribution Network Service Provider*,

in accordance with clauses 5.4A(f)(3) or 5.5(f)(3).

negotiated use of system charges

The charges described in clauses 5.4A(f)(3) or 5.5(f)(3).

negotiating framework

For a *Transmission Network Service Provider*, the negotiating framework approved or included by the *AER* for that *Transmission Network Service Provider* in a final decision under clause 6A.14.1(6).

For a *Distribution Network Service Provider*, a negotiating framework as approved or substituted by the *AER* in its final decision under clause 6.12.1(15).

NEM

The *National Electricity Market*.

NEMMCO

National Electricity Market Management Company Limited A.C.N. 072 010 327.

***NEMMCO* co-ordinating centre**

The control centre from which *NEMMCO* conducts *market* related activities and the coordination of the operation of the *national grid*.

NEMMCO intervention event

An event where *NEMMCO* intervenes in the *market* under the *Rules* by:

(a) issuing a *direction* in accordance with clause 4.8.9; or

(b) exercising the *reliability and emergency reserve trader* in accordance with rule 3.20 by:

(1) *dispatching scheduled generating units*, *scheduled network services* or *scheduled loads* in accordance with a *scheduled reserve contract*; or

(2) *activating loads* or *generating units* under an *unscheduled reserve contract*.

***NEMMCO* power system security responsibilities**

The responsibilities described in clause 4.3.1.

network

The apparatus, equipment, plant and buildings used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail) excluding

any *connection assets*. In relation to a *Network Service Provider*, a *network* owned, operated or controlled by that *Network Service Provider*.

network capability

The capability of the *network* or part of the *network* to transfer electricity from one location to another.

network connection

The formation of a physical link between the *facilities* of two *Registered Participants* or a *Registered Participant* and a customer being a *connection* to a *transmission* or *distribution network* via *connection assets.*

network constraint

A *constraint* on a *transmission network* or *distribution network.*

network control ancillary service

A service identified in clause 3.11.4(a) which provides *NEMMCO* with a capability to control the real or *reactive power flow* into or out of a *transmission network* in order to:

(a) maintain the *transmission network* within its current, *voltage*, or stability limits following a *credible contingency event*; or

(b) enhance the value of *spot market* trading in conjunction with the *central dispatch* process.

network coupling point

The point at which *connection assets* join a *distribution network*, used to identify the *distribution service* price payable by a *Customer*.

network dispatch offer

An notice submitted by a *Scheduled Network Service Provider* to *NEMMCO* relating to the *dispatch* of a *scheduled network service* in accordance with clause 3.8.6A.

network element

A single identifiable major component of a *transmission system* or *distribution system* involving:

(a) an individual *transmission* or *distribution* circuit or a phase of that circuit; or

(b) a major item of apparatus or equipment associated with the function or operation of a *transmission line*, *distribution line* or an associated *substation* or *switchyard* which may include *transformers*, circuit breakers, *reactive plant* and *monitoring equipment* and control equipment.

network loop

A set of *network elements* that are *connected* together in the form of a closed path, that is in such a way that by progressing from each element to the next it is possible to return to the starting point.

network losses

Energy losses incurred in the transfer of electricity over a *transmission network* or *distribution network*.

network service

Transmission service or *distribution service* associated with the conveyance, and controlling the conveyance, of electricity through the *network*.

Network Service Provider

A person who engages in the activity of owning, controlling or operating a *transmission or distribution system* and who is registered by *NEMMCO* as a *Network Service Provider* under Chapter 2.

network service provider performance report

A report prepared by the *AER* under section 28V of the Law.

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 *network support payments* (if any) that is provided for in the *annual building block revenue requirement* for the *Transmission Network Service Provider* for that *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*.

network support pass through amount

The amount that should be passed through to *Transmission Network Users* in the *regulatory year* following the preceding *regulatory year*, in respect of a *network support event* for a *Transmission Network Service Provider*.

network support payment

A payment by a *Transmission Network Service Provider* to:

(a) any *Generator* providing *network* support services in accordance with clause 5.6.2; or

(b) any other person providing a *network* support service that is an alternative to *network augmentation*.

Network User

A *Generator*, a *Transmission Customer*, a *Distribution Customer* or a *Market Network Service Provider*.

new distribution network investment

Investment in a *new large distribution network asset* or a *new small distribution network asset*.

new large distribution network asset

An asset of a *Distribution Network Service Provider* which is an *augmentation* and in relation to which the *Distribution Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $10 million, unless the *AER* publishes a requirement that a *new large distribution network asset* is to be distinguished from a *new small distribution network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such a specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new large distribution network asset*.

new large network asset

A *new large distribution network asset* or a *new large transmission network asset.*

new large transmission network asset

An asset of a *Transmission Network Service Provider* which is an *augmentation* and in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $20 million (as varied in accordance with a *total capitalised expenditure threshold determination*), unless the *AER publishes* a requirement that a *new large transmission network asset* is to be distinguished from a *new small transmission network asset* if it involves satisfaction of other criteria. Where such a specification has been made, an asset must satisfy those other criteria to be a *new large transmission network asset* (rather than the total capitalised expenditure requirement unless that requirement is included by the *AER* in those other criteria).

~~**new large transmission network asset**~~

~~An asset of a *Transmission Network Service Provider* which is an *augmentation* and in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $10 million, unless the *AER* publishes a requirement that a *new large transmission*~~

~~*network asset* is to be distinguished from a *new small network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such a specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new large transmission network asset*.~~

new network investment

New distribution network investment or *new transmission network investment*.

new small distribution network asset

An asset of a *Distribution Network Service Provider* which is an *augmentation* and:

(a) in relation to which the *Distribution Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $1 million, unless the *AER* publishes a requirement that an asset will be a *new small distribution network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new small distribution network asset*; and

(b) is not a *new large distribution network asset*.

new small network asset

A *new small distribution network asset* or a *new small transmission network asset*.

new small transmission network asset

An asset of a *Transmission Network Service Provider* which is an *augmentation* and:

(a) in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $5 million (as varied in accordance with a *total capitalised expenditure threshold determination*), unless the *AER publishes* a requirement that an asset will be a *new small transmission network asset* if it involves satisfaction of other criteria. Where such a specification has been made, an asset must satisfy those other criteria to be a *new small transmission network asset* (rather than the total capitalised expenditure requirement unless that requirement is included by the *AER* in those other criteria); and

(b) is not a *new large transmission network asset*.

~~**new small transmission network asset**~~

~~An asset of a *Transmission Network Service Provider* which is an *augmentation* and:~~

~~(a) in relation to which the *Transmission Network Service Provider* has estimated it will be required to invest a total capitalised expenditure in excess of $1 million, unless the *AER* publishes a requirement that an asset will be a *new small transmission network asset* if it involves investment of a total capitalised expenditure in excess of another amount, or satisfaction of another criterion. Where such a specification has been made, an asset must require total capitalised expenditure in excess of that amount or satisfaction of those other criteria to be a *new small transmission network asset*; and~~

~~(b) is not a *new large transmission network asset*.~~

new transmission network investment

Investment in a *new large transmission network asset* or a *new small transmission network asset*.

NMAS

A *non-market ancillary service*.

NMI

A National Metering Identifier as described in clause 7.3.1(d).

NMI Standing Data

The following data in respect of a *connection point*:

(a) the *NMI* of the *connection point* and the street address of the relevant *connection point* to which that *NMI* is referable;

(b) the *NMI* checksum for the *connection point*;

(c) the identity of the *Local Network Service Provider*;

(d) the code (known as a TNI) identifying the relevant *transmission node* which identifies the *transmission loss factor* and/or *transmission use of system* charge for the *connection point*;

(e) the relevant *distribution loss factor* applicable to the *connection point*;

(f) the Network Tariff (identified by a code) applicable in respect of the *connection point*;

(g) the *NMI* classification code (as set out in the *Market Settlement and Transfer Solution Procedures*) of the *connection point*;

(h) the read cycle date, or date of next scheduled read or date in a relevant code representing the read cycle date or date of next scheduled read, for that *connection point*;

(i) the profile type applicable to the *connection point*; and

(j) such other categories of data as may be referred to in the *Market Settlement and Transfer Solution Procedures* as forming *NMI Standing Data*,

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

nomenclature standards

The standards approved by *NEMMCO* in conjunction with the *Network Service Providers* relating to numbering, terminology and abbreviations used for information transfer between *Registered Participants* as provided for in clause 4.12.

nominal voltage

The design *voltage* level, nominated for a particular location on the *power system*, such that power lines and circuits that are electrically connected other than through transformers have the same *nominal voltage* regardless of operating *voltage* and *normal voltage.*

non-credible contingency event

An event described in clause 4.2.3(e).

non-market ancillary service

Network control ancillary services and *system restart ancillary services*.

non-market generating unit

A *generating unit* whose *sent out generation* is purchased in its entirety by the *Local Retailer* or by a *Customer* located at the same *connection* point and which has been classified as such in accordance with Chapter 2.

Non-Market Generator

A *Generator* who has classified a *generating unit* as a *non-market generating unit* in accordance with Chapter 2.

Non-Registered Customer

A person who:

1. purchases electricity through a *connection point* with the *national grid* other than from the *spot market;* and

2. is eligible to be registered by *NEMMCO* as a *Customer* and to classify the *load* described in (1) as a *first-tier load* or a *second-tier load*, but is not so registered.

non-regulated transmission services

A *transmission service* that is neither a *prescribed transmission service* nor a *negotiated transmission service*.

non-scheduled generating unit

A *generating unit* so classified in accordance with Chapter 2.

non-scheduled generating system

A *generating system* comprising *non-scheduled generating units.*

Non-Scheduled Generator

A *Generator* in respect of which any *generating unit* is classified as a *non-scheduled generating unit* in accordance with Chapter 2.

non-scheduled load

A *market load* which is not a *scheduled load*.

normal operating frequency band

In relation to the *frequency* of the *power system*, means the range 49.9Hz to 50.1Hz or such other range so specified in the *power system security and reliability standards*.

normal operating frequency excursion band

In relation to the *frequency* of the *power system*, means the range specified as being acceptable for infrequent and momentary excursions of *frequency* outside the *normal operating frequency band*, being the range of 49.75 Hz to 50.25 Hz or such other range so specified in the *power system security and reliability standards*.

normal voltage

In respect of a *connection point*, its *nominal voltage* or such other *voltage* up to 10% higher or lower than *nominal voltage*, as approved by *NEMMCO*, for that *connection point* at the request of the *Network Service Provider* who provides *connection* to the *power system.*

normally off

Describes a *scheduled load* which, unless *dispatched* in accordance with its *dispatch bid*, and in accordance with clause 3.8.7(j), should be considered as being switched off.

normally on

Describes a *scheduled load* which, unless *dispatched* in accordance with its *dispatch bid*, and in accordance with clause 3.8.7(i), should be considered as being switched on.

off-loading price

The price specified for a *price band* and a *trading interval* in a *dispatch offer*, in accordance with clause 3.8.6, for the *off-loading* of a *scheduled generating unit* below its *self-dispatch level.*

off-loading price band

A *price band* submitted for *off-loading* below a *self-dispatch level* for a *trading interval* in a *dispatch offer.*

off-loading, off-load

The reduction in electricity output or consumption.

operating expenditure criteria

For a *Transmission Network Service Provider* – the matters listed in clause 6A.6.6(c)(1)–(3).

For a *Distribution Network Service Provider* – the matters listed in clause 6.5.6(c)(1)–(3).

operating expenditure factors

For a *Transmission Network Service Provider* – the factors listed in clause 6A.6.6(e)(1)–(10).

For a *Distribution Network Service Provider* – the factors listed in clause 6.5.6(e)(1)–(10).

operating expenditure objectives

For a *Transmission Network Service Provider* – the objectives set out in clause 6A.6.6(a).

For a *Distribution Network Service Provider* – the objectives set out in clause 6.5.6(a).

operational communication

A communication concerning the arrangements for, or actual operation of, the *power system* in accordance with the *Rules*.

operational frequency tolerance band

The range of *frequency* within which the *power system* is to be operated to cater for the occurrence of a *contingency event* as specified in the *power system security and reliability standards.*

outage

Any full or partial unavailability of equipment or *facility*.

outstandings

In relation to a *Market Participant*, the dollar amount determined by the formula in clause 3.3.9.

over-recovery amount

Any amount by which the revenue earned from the provision of *prescribed transmission services* in previous *financial years* exceeds the sum of the *AARR* in those *financial years*, grossed up by the application of an annual interest rate approved by the *AER* for this purpose.

Participant compensation fund

The fund of that name referred to in clause 3.16.

participant derogation

Has the meaning given in the *National Electricity Law*. The participant derogations are included in Chapter 8A.

Participant fees

The fees payable by *Registered Participants* described in clause 2.11.

participating jurisdiction

A jurisdiction that is a "participating jurisdiction" under the *National Electricity Law*.

PASA availability

The *physical plant capability* of a *scheduled generating unit*, *scheduled load* or *scheduled network* service, including any capability that can be made available within 24 hours.

pass through event

Any of the following is a pass through event:

(a) a regulatory change event;

(b) a service standard event;

(c) a tax change event;

(d) a terrorism event.

An *insurance event* is a pass through event for a *transmission determination* (in addition to those listed above).

An event nominated in a distribution determination as a pass through event is a pass through event for the determination (in addition to those listed above).

payment date

The 20th *business day* after the end of a *billing period.*

payment period

The typical period between trading and payment defined in schedule 3.3.

peak load

Maximum *load*.

performance incentive scheme parameters

For a *service target performance incentive scheme*, those parameters that are *published* by the *AER* in respect of that scheme pursuant to clause 6A.7.4(c).

performance standard

A standard of performance that:

(a) is established as a result of it being:

(1) accepted by *NEMMCO* in accordance with rule 4.14(d)(1);

(2) taken to be an applicable performance standard in accordance with clause 5.3.4A(i);

(3) deemed to apply in accordance with rule 4.14(h); or

(4) determined pursuant to rule 4.14(m); or

(b) is included in the register of *performance standards* established and maintained by *NEMMCO* under rule 4.14(n),

as the case may be.

performance standards commencement date

For:

(a) *Generators*, *Customers* and *Network Service Providers* who plan, own, operate or control a *facility* located in a *participating jurisdiction* (other than Tasmania), the *performance standards commencement date* is, in relation to that *facility*, 16 November 2003; and

(b) *Generators*, *Customers* and *Network Service Providers* who plan, own, operate or control a *facility* located in Tasmania, the *performance standards commencement date* is, in relation to that *facility*, the date that Tasmania becomes a *participating jurisdiction*.

physical plant capability

The maximum MW output or consumption which an item of electrical equipment is capable of achieving for a given period.

plant

In relation to a *connection point*, includes all equipment involved in generating, utilising or transmitting electrical *energy*.

In relation to *dispatch bids and offers*, controllable generating equipment and controllable *loads.*

In relation to the *statement of opportunities* prepared by *NEMMCO*, individually controllable generating facilities registered or capable of being registered with *NEMMCO*.

plant standard

An Australian or international standard or a part thereof that:

(a) the *Reliability Panel* determines to be an acceptable alternative to a particular *minimum access standard* or *automatic access standard* for a particular class of *plant*, or

(b) a schedule in Chapter 5 establishes as an acceptable alternative to a particular *minimum access standard* or *automatic access standard* for a particular class of *plant*.

positive change event

For a *Transmission Network Service Provider*, a *pass through event* which entails the *Transmission Network Service Provider* incurring *materially* higher costs in providing *prescribed transmission services* than it would have incurred but for that event, but does not include a *contingent project* or an associated *trigger event.*

For a *Distribution Network Service Provider*, a *pass through event* that materially increases the costs of providing *direct control services*.

positive network support event

A *network support event* which entails a *Transmission Network Service Provider* making higher *network support payments* in the preceding *regulatory year* than the amount of *network support payments* (if any) that is provided for in the *annual building block revenue requirement* for the provider for that *regulatory year*.

positive pass through amount

For a *Transmission Network Service Provider*, an amount (not exceeding the *eligible pass through amount*) proposed by the provider under clause 6A.7.3(c).

For a *Distribution Network Service Provider*, an amount (not exceeding the *eligible pass through amount*) proposed by the provider under clause 6.6.1(c).

postage stamp basis

A system of charging *Network Users* for *transmission service* or *distribution service* in which the price per unit is the same regardless of how much *energy* is used by the *Network User* or the location in the *transmission network* or *distribution network* of the *Network User*.

post-tax revenue model

For a *Transmission Network Service Provider*, the model prepared and *published* by the *AER* in accordance with clause 6A.5.1.

For a *Distribution Network Service Provider*, the model prepared and *published* by the *AER* in accordance with clause 6.4.1.

potential transmission project

New transmission network investment identified by the *AEMC* which, in the opinion of the *AEMC*, is likely, if constructed, to relieve forecast *constraints* in respect of *national transmission flow paths* between *regional reference nodes*.

potential value

In relation to a *transaction* for a *Market Participant*, the dollar amount determined by the procedure in clause 3.3.14.

power factor

The ratio of the *active power* to the *apparent power* at a *metering point*.

power station

In relation to a *Generator*, a *facility* in which any of that *Generator's generating units* are located.

power system

The electricity power system of the *national grid* including associated *generation* and *transmission* and *distribution networks* for the *supply* of electricity, operated as an integrated arrangement.

power system damping

The rate at which disturbances to the *satisfactory operating state* reduce in magnitude.

power system demand

The total *load* (in MW) supplied by the *power system*.

power system operating procedures

The procedures to be followed by *Registered Participants* in carrying out operations and/or maintenance activities on or in relation to primary and *secondary equipment connected* to or forming part of the *power system* or *connection points*, as described in clause 4.10.1.

power system reserve constraint

A *constraint* in the *central dispatch* due to the need to provide or maintain a specified type and level of *scheduled reserve*.

power system security

The safe scheduling, operation and control of the *power system* on a continuous basis in accordance with the principles set out in clause 4.2.6.

power system security and reliability standards

The standards (other than the *system restart standard*) governing *power system security* and *reliability* of the *power system* to be approved by the *Reliability Panel* on the advice of *NEMMCO*, but which may include but are not limited to standards for the *frequency* of the *power system* in operation, *contingency capacity* reserves (including guidelines for assessing requirements), *short term capacity reserves* and *medium term capacity reserves*.

power transfer

The instantaneous rate at which *active energy* is transferred between *connection points*.

power transfer capability

The maximum permitted *power transfer* through a *transmission* or *distribution network* or part thereof.

pre-dispatch

Forecast of *dispatch* performed one *day* before the *trading day* on which *dispatch* is scheduled to occur.

pre-dispatch schedule

A schedule prepared in accordance with clause 3.8.20(a).

preliminary program

The program to be prepared by a *Network Service Provider* showing proposed milestones for *connection* and access activities as specified in clause 5.3.3(b)(6).

preliminary statement

Has the meaning given in clause 3.15.14(a).

prescribed common transmission services

Prescribed transmission services that provide equivalent benefits to all *Transmission Customers* who have a *connection point* with the relevant *transmission network* without any differentiation based on their location within the *transmission system.*

prescribed entry services

Entry services that are *prescribed transmission services* by virtue of the operation of clause 11.6.11.

prescribed exit services

Exit services that are *prescribed transmission services* by virtue of the operation of clause 11.6.11 and *exit services* provided to *Distribution Network Service Providers.*

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 *NEMMCO* to be provided under the *Rules*; 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*;

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:

(a) provide different benefits to *Transmission Customers* who have a *connection point* with the relevant *transmission network* depending on their location within the *transmission system*; and

(b) are not *prescribed common transmission services*, *prescribed entry services* or *prescribed exit services*.

price band

A MW quantity specified in a *dispatch bid*, *dispatch offer* or *market ancillary service offer* as being available for *dispatch* at a specified price.

pricing methodology

For a *Transmission Network Service Provider*, means the pricing methodology approved by the *AER* for that *Transmission Network Service Provider* and included in a *transmission determination* as referred to in rule 6A.24.

pricing methodology guidelines

Guidelines made by the *AER* under rule 6A.25 that contain the matters set out in clause 6A.25.2.

Pricing Principles for Prescribed Transmission Services

The principles set out in rule 6A.23.

pricing proposal

A pricing proposal under Part I of Chapter 6.

pricing zone

A geographic area within which *Network Users* are charged a specific set of *distribution service* prices.

primary restart service

A *system restart ancillary service* that meets the technical and availability requirements of a *primary restart service* specified by *NEMMCO* under clause 3.11.4A(d).

profile

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

projected assessment of system adequacy process ("PASA")

The medium term and short term processes described in clause 3.7 to be administered by *NEMMCO*.

Proponent

In respect of clause 5.7.7 has the meaning given in clause 5.7.7(a).

proposed contingent capital expenditure

The total forecast capital expenditure for the relevant *proposed contingent project*, as included in the *Revenue Proposal* for that project.

proposed contingent project

A proposal by a *Transmission Network Service Provider* as part of a *Revenue Proposal* for a project to be determined by the *AER* as a *contingent project* for the purposes of a *revenue determination* in accordance with clause 6A.8.1(b).

prospective reallocation

A *reallocation transaction* that occurs in a *trading interval* that takes place at a time after the *reallocation request* is made.

protection system

A system, which includes equipment, used to protect a *Registered Participant's facilities* from damage due to an electrical or mechanical fault or due to certain conditions of the *power system*.

prudential margin

A dollar amount to be determined by *NEMMCO* in accordance with clause 3.3.8.

prudential requirements

The requirements which must be satisfied as a condition of eligibility to remain a *Market Participant* in accordance with clause 3.3.

publish/publication

A document is published by the *AER* if it is:

(a) published on the *AER*'s website; and

(b) made available for public inspection at the *AER*'s public offices; and

(c) in the case of a document inviting submissions from members of the public – published in a newspaper circulating generally throughout Australia.

A document is published by someone else if it is made available to *Registered Participants* electronically.

ramp rate

The rate of change of *active power* supplied from a *generating unit*, supplied to a *load* or transferred by a *scheduled network service*.

rated active power

(1) In relation to a *generating unit*, the maximum amount of *active power* that the *generating unit* can continuously deliver at the *connection point* when operating at its *nameplate rating*.

(2) In relation to a *generating system*, the combined maximum amount of *active power* that its in-service *generating units* can deliver at the *connection point*, when its in-service *generating units* are operating at their *nameplate ratings*.

reaction period

The estimated period of time taken to remove defaulting *Market Participants* from the *market* as defined in schedule 3.3.

reactive energy

A measure, in varhour–(varh), of the alternating exchange of stored energy in inductors and capacitors, which is the time-integral of the product of *voltage* and the out-of-phase component of current flow across a *connection point*.

reactive plant

Plant which is normally specifically provided to be capable of providing or absorbing *reactive power* and includes the *plant* identified in clause 4.5.1(g).

reactive power

The rate at which *reactive energy* is transferred.

Reactive power is a necessary component of alternating current electricity which is separate from *active power* and is predominantly consumed in the creation of magnetic fields in motors and *transformers* and produced by *plant* such as:

(a) alternating current generators;

(b) capacitors, including the capacitive effect of parallel *transmission* wires; and

(c) *synchronous condensers*.

reactive power capability

The maximum rate at which *reactive energy* may be transferred from a *generating unit* to a *connection point* as specified or proposed to be specified in a *connection agreement* (as the case may be).

reactive power reserve

Unutilised sources of *reactive power* arranged to be available to cater for the possibility of the unavailability of another source of *reactive power* or increased requirements for *reactive power*.

reactive power support/reactive support

The provision of *reactive power*.

reactor

A device, similar to a *transformer*, specifically arranged to be *connected* into the *transmission system* during periods of low *load* demand or low *reactive power* demand to counteract the natural capacitive effects of long *transmission lines* in generating excess *reactive power* and so correct any *transmission voltage* effects during these periods.

reallocation

A process under which two *Market Participants* request *NEMMCO* to make matching debits and credits to the position of those *Market Participants* with *NEMMCO*.

reallocation amount

In respect of a *Market Participant*, the positive or negative dollar amount in respect of a *reallocation transaction* being an amount payable to or by the *Market Participant*.

reallocation procedures

The procedures *published* by *NEMMCO* under clause 3.15.11A.

reallocation request

A request to *NEMMCO* for a *reallocation*, pursuant to clause 3.15.11(c).

reallocation transaction

A *transaction* which occurs when the applicable *trading interval* specified in a *reallocation request* occurs and the *reallocation request* has been registered and not deregistered before the expiration of the *trading interval*.

Reallocator

A person registered as a Reallocator by *NEMMCO* in accordance with rule 2.5B.

reasonable worst case

A position that, while not being impossible, is to a probability level that the estimate would not be exceeded more than once in 48 months.

rebid

A variation to a bid or offer made in accordance with clause 3.8.22.

reduced payment period request

A written request to *NEMMCO* for the purpose of schedule 3.3, paragraph VI(C).

Referred Affected Participant

An *Affected Participant* who has a claim referred to an independent expert pursuant to clauses 3.12.2(l) or 3.12.2(m).

Referred Directed Participant

A *Directed Participant* who has a claim referred to an independent expert pursuant to clauses 3.15.7B(c) or 3.15.7B(d).

Referred Market Customer

A *Market Customer* who has a claim referred to an independent expert pursuant to clauses 3.12.2(l) or 3.12.2(m).

region, regional

An area determined by the *AEMC* in accordance with Chapter 2A, being an area served by a particular part of the *transmission network* containing one or more major *load centres* or *generation centres* or both.

regional benefit directions procedures

Has the meaning given in clause 3.15.8(b2).

regional reference node

A location on a *transmission* or *distribution network* to be determined for each *region* by the *AEMC* in accordance with Chapter 2A.

regional reference price

Spot price at the *regional reference node*.

regional specific power system operating procedures

The procedures described in clause 4.10.1(a)(3).

Regions Publication

The document *published* by *NEMMCO* under clause 2A.1.3 that provides a list of all *regions*, *regional reference nodes* and the *region* to which each *market connection point* is assigned.

registered bid and offer data

Data submitted by *Scheduled Generators* and *Market Participants* to *NEMMCO* in relation to their *scheduled loads, scheduled generating units* and *scheduled market network services* in accordance with schedule 3.1.

Registered Participant

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

Registered Participant Agent

An agent of a *Registered Participant* appointed under clause 4.11.5.

regulated interconnector

An *interconnector* which is referred to in clause 11.8.2 of the *Rules* and is subject to *transmission service* regulation and pricing arrangements in Chapter 6A.

regulating capability

The capability to perform *regulating duty*.

regulating capability constraints

Constraints on the formulation of a realisable *dispatch* or *predispatch schedule* due to the need to provide for *regulating capability*.

regulating duty

In relation to a *generating unit,* the duty to have its *generated* output adjusted frequently so that any *power system frequency* variations can be corrected.

regulating lower service

The service of controlling the level of *generation* or *load* associated with a particular *facility,* in accordance with the requirements of the *market ancillary service specification*, in accordance with electronic signals from *NEMMCO* in order to lower the *frequency* of the *power system.*

regulating raise service

The service of controlling the level of *generation* or *load* associated with a particular *facility*, in accordance with the requirements of the *market ancillary service specification*, in accordance with electronic signals from *NEMMCO* in order to raise the *frequency* of the *power system.*

regulation services

The *regulating raise service* and *regulating lower service*.

regulatory change event

A change in a *regulatory obligation* or *requirement* that:

(a) falls within no other category of *pass through event*; and

(b) occurs during the course of a *regulatory control period*; and

(c) substantially affects the manner in which the *Transmission Network Service Provider* provides *prescribed transmission services* or the *Distribution Network Service Provider* provides *direct control services* (as the case requires); and

(d) *materially* increases or *materially* decreases the costs of providing those services.

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.

regulatory obligation or requirement

Has the meaning assigned in the Law.

regulatory proposal

A proposal (by a *Distribution Network Service Provider*) under rule 6.8.

regulatory test

The test developed and published by the *AER* in accordance with clause 5.6.5A, as in force from time to time, and includes amendments made in accordance with clause 5.6.5A.

regulatory year

Each consecutive period of 12 calendar months in a *regulatory control period*, the first such 12 month period commencing at the beginning of the *regulatory control period* and the final 12 month period ending at the end of the *regulatory control period.*

related body corporate

In relation to a body corporate, a body corporate that is related to the first-mentioned body by virtue of the Corporations Act 2001 (Cth).

relevant NEMMCO intervention event

A *NEMMCO intervention event* that involves the exercise of the *reliability and emergency reserve trader* in accordance with rule 3.20 as referred to in paragraph (b) of the definition of *NEMMCO intervention event*.

relevant tax

Any tax payable by a *Transmission Network Service Provider* or a *Distribution Network Service Provider* other than:

(a) income tax and capital gains tax;

(b) stamp duty, financial institutions duty and bank accounts debits tax;

(c) penalties, charges, fees and interest on late payments, or deficiencies in payments, relating to any tax; or

(d) any tax that replaces or is the equivalent of or similar to any of the taxes referred to in paragraphs (a) to (b) (including any State equivalent tax).

Relevant Transmission Network Service Provider, Relevant TNSP

In respect of clause 5.7.7 has the meaning given in clause 5.7.7(a).

reliability

The probability of a system, device, *plant* or equipment performing its function adequately for the period of time intended, under the operating conditions encountered.

reliability and emergency reserve trader (RERT)

The actions taken by *NEMMCO* as referred to in clause 3.20.2, in accordance with rule 3.20, to ensure reliability of *supply*.

reliability augmentation

A *transmission network augmentation* that is necessitated principally by inability to meet the minimum *network* performance requirements set out in schedule 5.1 or in relevant legislation, regulations or any statutory instrument of a *participating jurisdiction*.

Reliability Panel

The panel established by the *AEMC* under section 38 of the *National Electricity Law*.

reliable

The expression of a recognised degree of confidence in the certainty of an event or action occurring when expected.

reliable operating state

In relation to the *power system*, has the meaning set out in clause 4.2.7.

remote acquisition

The acquisition of interval *metering data* from a *metering installation*, where the acquisition process transmits the *metering data* from the site of the *metering point* to the *metering database*, and does not, at any time, require the presence of a person at, or near, the interval *meter* for the purposes of data collection or data verification (whether this occurs manually as a walk-by reading or through the use of a vehicle as a close proximity drive-by reading), and remote acquisition includes but is not limited to methods that transmit *metering data* via:

(1) direct dial-up;

(2) satellite;

(3) the internet;

(4) a general packet radio service;

(5) power line carrier; or

(6) any other equivalent technology.

remote control equipment

Equipment used to control the operation of elements of a *power station* or *substation* from a *control centre*.

remote monitoring equipment

Equipment installed to enable monitoring of a *facility* from a *control centre.*

replacement transmission network asset

A new asset of a *Transmission Network Service Provider* that will replace any existing element of its *transmission network* in respect of which the *Transmission Network Service Provider* reasonably estimates it will be required to invest total capitalised expenditure in excess of $5 million (as varied in accordance with a *total capitalised expenditure threshold determination*). For the avoidance of doubt, such an asset does not include an *augmentation*.

representative

In relation to a person, any employee, agent or professional adviser of:

(a) that person; or

(b) a *related body corporate* of that person; or

(c) a third party contractor to that person.

required pass through amount

In respect of a *negative change event* for a *Transmission Network Service Provider*, the costs in the provision of *prescribed transmission services* that the *Transmission Network Service Provider* has saved and is likely to save until the end of the *regulatory control period* as a result of that *negative change event* (as opposed to the revenue impact of that event).

In respect of a negative change event for a *Distribution Network Service Provider*, the costs in the provision of *direct control services* that the *Distribution Network Service Provider* has saved and is likely to save up to the end of the *regulatory control period* as a result of the *negative change event* (as opposed to the revenue impact of that event).

RERT guidelines

The guidelines developed and *published* by the *Reliability Panel* under clause 3.20.8.

RERT principles

The principles referred to in clause 3.20.2(b).

reserve

Scheduled reserve or *unscheduled reserve*.

reserve contract

A *scheduled reserve contract* or an *unscheduled reserve contract*.

response breakpoint

(a) In relation to a *market ancillary service offer* to raise the *frequency* of the *power system*, the level of associated *generation* or *load* (in MW) above which the amount of response specified in the *offer* reduces with increased *generation* or *load* level; and

(b) in relation to a *market ancillary service offer* to lower the *frequency* of the *power system*, the level of associated *generation* or *load* (in MW) below which the amount of response specified in the *offer* reduces with decreased *generation* or *load* level.

response capability

(a) In relation to a *market ancillary service offer* to raise the *frequency* of the *power system*, the amount of the response in (MW) which is specified in the

offer for every level of associated *generation* or *load* below the associated *response breakpoint*; and

(b) in relation to a *market ancillary service offer* to lower the *frequency* of the *power system*, the amount of the response in (MW) which is specified in the *offer* for every level of associated *generation* or *load* above the associated *response breakpoint.*

responsible person

The person who has responsibility for the provision of a *metering installation* for a particular *connection point*, being either the *Local Network Service Provider* or the *Market Participant* as described in Chapter 7.

restriction demand reduction

The reduction in a *Market Customer's* demand due to the imposition of *mandatory restrictions* as reasonably determined by an independent expert in accordance with clause 3.12A.7. For the avoidance of doubt, the reduction of a *Market Customer's* demand due to the imposition of *mandatory restrictions* should exclude any reduction in its demand which the *Market Customer* claims was due to the operation of *generation* and as reasonably verified by the independent expert in a similar manner to that used by the independent expert to determine restrictions due to demand management.

restriction offer

An offer by a *Scheduled Generator* or a *Scheduled Network Service Provider* to provide capacity to *NEMMCO* for all or part of a *mandatory restriction period* made in accordance with the *restriction offer procedures.*

restriction offer procedures

The procedures developed by *NEMMCO* in accordance with clause 3.12A.1.

restriction shortfall amount

The amount determined in accordance with clause 3.12A.7(b).

retailer of last resort

In relation to a jurisdiction, means a person or persons required under the retailer of last resort arrangements of that jurisdiction to assume the obligations under the *Rules* (including the obligation to pay *trading amounts* and other amounts due under the *Rules*) of a *Market Customer* that has defaulted in the performance of its obligations under the *Rules*.

revenue determination

A determination referred to in clause 6A.2.2(1) and rule 6A.4 as substituted (if at all) pursuant to clause 6A.7.1 or rule 6A.15 or as amended pursuant to clause 6A.8.2.

revenue meter

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

revenue metering data

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

revenue metering installation

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

revenue metering point

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

Revenue Proposal

For a *Transmission Network Service Provider*, a proposal submitted or resubmitted by the *Transmission Network Service Provider* to the *AER* pursuant to clause 6A.10.1(a), clause 6A.11.2 or clause 6A.12.3(a) (as the context requires).

review

An examination of the specified matters conducted to the standard specified for a "review" in Auditing Standard AUS106: "Explanatory Framework for standards on Audit and Audit Related Services" prepared by the Auditing Standards Board, as varied from time to time.

revised statement

A statement issued by *NEMMCO* under clause 3.15.19 following the resolution of a dispute regarding a *final statement*.

RMS phase voltage

The *voltage* of *supply* measured as the average of the root mean square of the *voltages* between each pair of phases.

roll forward model

According to context:

(a) the model developed and published by the *AER* for the roll forward of the regulatory asset base for *transmission systems* in accordance with clause 6A.6.1;

(b) the model developed and published by the *AER* for the roll forward of the regulatory asset base for *distribution systems* in accordance with clause 6.5.1.

routine revised statement

A *settlement statement* issued by *NEMMCO* under clause 3.15.19(b).

Rule fund

A fund referred to in clause 1.11(a).

Rules

The rules called the National Electricity Rules made under Part 7 of *the National Electricity Law* as amended from time to time in accordance with that Part.

Rules bodies

Any person or body, other than *NEMMCO*, the *AER*, the *AEMC*, or the *ACCC*, that is appointed or constituted by the *Rules* to perform functions under the *Rules*.

Rules consultation procedures

The procedures for consultation with *Registered Participants* or other persons as set out in clause 8.9.

satisfactory operating state

In relation to the *power system*, has the meaning given in clause 4.2.2.

scheduled generating unit

(a) A *generating unit* so classified in accordance with Chapter 2.

(b) For the purposes of Chapter 3 and rule 4.9, two or more *generating units* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

scheduled generating system

A *generating system* comprising *scheduled generating units.*

Scheduled Generator

A *Generator* in respect of which any *generating unit* is classified as a *scheduled generating unit* in accordance with Chapter 2.

scheduled high price

The dollar amount per MWh or MW, as the case may be, determined as such by *NEMMCO* pursuant to clause 3.3.17.

scheduled load

(a) A *market load* which has been classified by *NEMMCO* in accordance with Chapter 2 as a *scheduled load* at the *Market Customer's* request. Under Chapter 3, a *Market Customer* may submit *dispatch bids* in relation to *scheduled loads.*

(b) For the purposes of Chapter 3 and rule 4.9, two or more *scheduled loads* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

scheduled low price

The dollar amount per MWh or MW, as the case may be, determined as such by *NEMMCO* pursuant to clause 3.3.17.

scheduled network service

(a) A *network service* which is classified as a *scheduled network service* in accordance with Chapter 2.

(b) For the purposes of Chapter 3 and rule 4.9, two or more *scheduled network services* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

Scheduled Network Service Provider

A *Network Service Provider* who has classified any of its *network services* as a *scheduled network service.*

scheduled plant

In respect of a *Registered Participant*, a *scheduled generating unit*, a *semi-scheduled generating unit*, a *scheduled network service* or a *scheduled load* classified by or in respect to that *Registered Participant* in accordance with Chapter 2.

scheduled reserve

The amount of surplus or unused capacity:

(a) of *scheduled generating units*;

(b) of *scheduled network services*; or

(c) arising out of the ability to reduce *scheduled loads*.

scheduled reserve contract

A contract entered into by *NEMMCO* for the provision of *scheduled reserve* in accordance with rule 3.20.

scheduling error

Scheduling error means any of the events described in clause 3.8.24(a).

secondary equipment

Those assets of a *Market Participant*'s *facility* which do not carry the *energy* being traded, but which are required for control, protection or operation of assets which carry such *energy*.

secondary restart service

A *system restart ancillary service* that meets the technical and availability requirements of a *secondary restart service* specified by *NEMMCO* under clause 3.11.4A(d).

Second-Tier Customer

A *Customer* which has classified any *load* as a *second-tier load* in accordance with Chapter 2.

second-tier load

Electricity purchased at a *connection point* in its entirety other than directly from the *Local Retailer* or the *spot market* and which is classified as a *second-tier load* in accordance with Chapter 2.

secure operating state

In relation to the *power system* has the meaning given in clause 4.2.4.

self-commitment, self-commit

Commitment, where the decision to *commit* a *generating unit* was made by the relevant *Generator* without instruction or direction from *NEMMCO*.

self-decommitment

Decommitment, where the decision to *decommit* a *generating unit* was made by the relevant *Generator* without instruction or direction from *NEMMCO*.

self-dispatch level

The level of *generation* in MW, as specified in a *dispatch offer* for a *generating unit* and a *trading interval*, which is the level at which that *generating unit* must be *dispatched* by *NEMMCO* in that *trading interval* unless otherwise *dispatched* in accordance with clause 3.8 or unless required to operate under a *direction* issued by *NEMMCO* in accordance with clause 4.8.9.

semi-scheduled generating system

A *generating system* comprising *semi-scheduled generating units*.

semi-scheduled generating unit

(a) A *generating unit* classified in accordance with clause 2.2.7.

(b) For the purposes of Chapter 3 and rule 4.9, two or more *generating units* referred to in paragraph (a) that have been aggregated in accordance with clause 3.8.3.

Semi-Scheduled Generator

A *Generator* in respect of which any *generating unit* is classified as a *semi-scheduled generating unit* in accordance with Chapter 2.

sensitive loads

Loads defined as sensitive for each *participating jurisdiction* by the *Jurisdictional System Security Coordinator* for that *participating jurisdiction*.

sent out generation

In relation to a *generating unit*, the amount of electricity *supplied* to the *transmission* or *distribution network* at its *connection point*.

Service Applicant

According to context:

(a) a person who is an existing or intending *Registered Participant* or a person who is eligible to become a *Registered Participant*; or

(b) a person who asks a *Distribution Network Service Provider* for access to a *distribution service*.

service standard event

A legislative or administrative act or decision that:

(a) has the effect of:

(i) substantially varying, during the course of a *regulatory control period*, the manner in which a *Transmission Network Service Provider* is required to provide a *prescribed transmission service*, or a *Distribution Network Service Provider* is required to provide a *direct control service*; or

(ii) imposing, removing or varying, during the course of a *regulatory control period*, minimum service standards applicable to *prescribed transmission services* or *direct control services*; or

(iii) altering, during the course of a *regulatory control period*, the nature or scope of the *prescribed transmission services* or *direct control services*, provided by the service provider; and

(b) *materially* increases or *materially* decreases the costs to the service provider of providing *prescribed transmission services* or *direct control services*.

service target performance incentive scheme

A For a *Transmission Network Service Provider* – a scheme developed and *published* by the *AER* in accordance with clause 6A.7.4.

For a *Distribution Network Service Provider* – a scheme developed and *published* by the *AER* in accordance with clause 6.6.2.

settlement amount

The amount calculated by *NEMMCO* pursuant to clause 3.15.12.

settlement statement

Includes an *interim statement, preliminary statement* and *final statement.*

settlements

The activity of producing bills and credit notes for *Market Participants*.

settlements ready data

The *metering data* that has undergone a validation and substitution process by *NEMMCO* for the purpose of *settlements* and is delivered to the *metering database.*

settlements residue

Any surplus or deficit of funds retained by *NEMMCO* upon completion of *settlements* to all *Market Participants* in respect of a *trading interval*.

settlement residue committee

The committee established by *NEMMCO* in accordance with clause 3.18.5.

settlement residue distribution agreement or SRD agreement

Has the meaning given in clause 3.18.1(b).

shared distribution service

A service provided to a *Distribution Network User* for use of a *distribution network* for the conveyance of electricity (including a service that ensures the integrity of the related *distribution system*).

shared transmission service

A service provided to a *Transmission Network User* for use of a *transmission network* for the conveyance of electricity (including a service that ensures the integrity of the related *transmission system*).

short circuit fault

A fault having a metallic conducting path between any two or more conductors or between any conductor and ground, including touching conductors and faults through earthing facilities, and excluding faults within equipment at a station.

short term capacity reserve

At any time, the amount of surplus or unused generating capacity indicated by the relevant *Generators* as being available for any half hour period during the next 7 *days* and which is assessed as being in excess of the capacity requirement to meet the current forecast *load* demand, taking into account the known or historical levels of demand management.

short term capacity reserve standard

The level of *short term capacity reserve* required for a particular period in accordance with the *power system security and reliability standards*.

short term PASA

The *PASA* in respect of the period from 2 *days* after the current *trading day* to the end of the 7th day after the current *trading day* inclusive in respect of each *trading interval* in that period.

short term PASA inputs

The inputs to be prepared by *NEMMCO* in accordance with clause 3.7.3(d).

shunt capacitor

A type of *plant connected* to a *network* to generate *reactive power*.

shunt reactor

A type of *plant connected* to a *network* to absorb *reactive power*.

single contingency

In respect of a *transmission* or *distribution network* and *Network Users*, a sequence of related events which result in the removal from service of one *Network User*, *transmission* or *distribution line*, or *transformer*. The sequence of events may include the application and clearance of a fault of defined severity.

single credible contingency event

An event described in clause 4.2.3(c).

slow lower service

The service of providing, in accordance with the requirements of the *market ancillary service specification*, the capability of controlling the level of *generation*

or *load* associated with a particular *facility* in response to the locally sensed *frequency* of the *power system* in order to stabilise a rise in that *frequency*.

slow raise service

The service of providing, in accordance with the requirements of the *market ancillary service specification*, the capability of controlling the level of *generation* or *load* associated with a particular *facility* in response to the locally sensed *frequency* of the *power system* in order to stabilise a fall in that *frequency*.

slow start generating unit

A *generating unit* described in clause 3.8.17(a).

slow start reserve generating unit

A *slow start generating unit* providing *scheduled reserve*.

Special Participant

A *System Operator* or a *Distribution System Operator*.

special revised statement

A *settlement statement* issued by *NEMMCO* under clause 3.15.19(a)(3).

spot market

The spot market established and operated by *NEMMCO* in accordance with clause 3.4.1.

spot market transaction

A transaction as defined pursuant to clause 3.15.6 which occurs in the *spot market*.

spot price

The price for electricity in a *trading interval* at a *regional reference node* or a *connection point* as determined in accordance with clause 3.9.2.

spot price forecast

A forecast of the *spot price*.

SRAS

A *system restart ancillary service*.

stand-alone amount

For a *category of prescribed transmission services*, the costs of a *transmission system* asset that would have been incurred had that *transmission system* asset been developed, exclusively to provide that *category of prescribed transmission services*.

standard control service

A *direct control service* that is subject to a control mechanism based on a *Distribution Network Service Provider's total revenue requirement.*

Standards Australia

The Standards Association of Australia and includes its heirs or successors in business.

statement of opportunities

A statement prepared by *NEMMCO* to provide information to assist *Scheduled Generators, Semi-Scheduled Generators, Transmission Network Service Providers* and *Market Participants* in making an assessment of the future need for electricity generating or demand management capacity or augmentation of the *power system*.

statement of regulatory intent

A statement issued by the *AER* under clause 6.5.4(c).

static excitation system

An *excitation control system* in which the power to the rotor of a *synchronous generating unit* is transmitted through high power solid-state electronic devices.

static VAR compensator

A device specifically provided on a *network* to provide the ability to generate and absorb *reactive power* and to respond automatically and rapidly to *voltage* fluctuations or *voltage* instability arising from a disturbance or disruption on the *network.*

submission guidelines

The guidelines made by the *AER* in accordance with rule 6A.10 for the purposes of guiding a *Transmission Network Service Provider* in the submission of a *Revenue Proposal* under Part E of Chapter 6A.

substation

A *facility* at which two or more lines are switched for operational purposes. May include one or more *transformers* so that some *connected* lines operate at different nominal *voltages* to others.

supply

The delivery of electricity.

survey period

An agreed sample period used to determine the allocation of costs and prices for use of *transmission network* or *distribution network* assets.

suspended region

A region in which the *spot market* is suspended in accordance with clause 3.14.5(a).

suspension notice

A notice issued by *NEMMCO* to a *defaulting Market Participant* pursuant to clause 3.15.21(c).

switchyard

The *connection point* of *a generating unit* into the *network*, generally involving the ability to *connect* the *generating unit* to one or more outgoing *network* circuits.

Sydney time

Eastern Standard Time or Eastern Daylight Saving Time as applicable in Sydney.

synchronise

The act of *synchronising* a *generating unit* or a *scheduled network service* to the *power system*.

synchronising, synchronisation

To electrically *connect* a *generating unit* or a *scheduled network service* to the *power system*.

synchronous condensors

Plant, similar in construction to a *generating unit* of the *synchronous generator* category, which operates at the equivalent speed of the *frequency* of the *power system,* specifically provided to generate or absorb *reactive power* through the adjustment of rotor current.

synchronous generating unit

The alternating current generators of most thermal and hydro (water) driven power turbines which operate at the equivalent speed of the *frequency* of the *power system* in its *satisfactory operating state*.

synchronous generator voltage control

The automatic *voltage control system* of a *generating unit* of the *synchronous generator* category which changes the output *voltage* of the *generating unit* through the adjustment of the generator rotor current and effectively changes the *reactive power* output from that *generating unit.*

System Operator

A person whom *NEMMCO* has engaged as its agent, or appointed as its delegate, under clause 4.3.3 to carry out some or all of *NEMMCO's* rights, functions and

obligations under Chapter 4 of the *Rules* and who is registered by *NEMMCO* as a *System Operator* under Chapter 2.

system restart ancillary service

A service provided by *facilities* with *black start capability* which allows:

(a) *energy* to be supplied; and

(b) a *connection* to be established,

sufficient to restart large *generating units* following a *major supply disruption*.

system restart plan

The plan described in clause 4.8.12(a).

system restart standard

The standard as determined by the *Reliability Panel* in accordance with clause 8.8.3(a)(1a), for the acquisition of *system restart ancillary services*.

system standard

A standard for the performance of the *power system* as set out in schedule 5.1a.

system-wide benefits

Benefits that extend beyond a *Transmission Network User*, or group of *Transmission Network Users*, at a single *transmission connection point* to other *Transmission Network Users*.

take or pay contract

A contract between a buyer and a seller of an asset-based service under which the buyer undertakes to pay regularly to the seller a fixed or minimum sum regardless of the actual level of consumption of the service by the buyer. The contract has the effect of transferring market risk associated with the assets from the seller (as the owner of the assets) to the buyer.

tap-changing transformer

A *transformer* with the capability to allow internal adjustment of output *voltages* which can be automatically or manually initiated and which is used as a major component in the control of the *voltage* of *transmission* and *distribution networks* in conjunction with the operation of *reactive plant*. The *connection point* of a *generating unit* may have an associated tap-changing transformer, usually provided by the *Generator*.

tariff class

A class of customers for one or more *direct control services* who are subject to a particular tariff or particular tariffs.

tax

Any tax, levy, impost, deduction, charge, rate, rebate, duty, fee or withholding which is levied or imposed by an *Authority*.

tax change event

A tax change event occurs if:

(a) any of the following occurs during the course of a *regulatory control period* for a *Transmission Network Service Provider* or a *Distribution Network Service Provider*:

(i) a change in a *relevant tax*, in the application or official interpretation of a *relevant tax*, in the rate of a *relevant tax*, or in the way a *relevant tax* is calculated;

(ii) the removal of a *relevant tax*;

(iii) the imposition of a *relevant tax*; and

(b) in consequence, the costs to the service provider of providing *prescribed transmission services* or *direct control services* are materially increased or decreased.

technical envelope

The limits described in clause 4.2.5.

telecommunications network

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

terms and conditions of access

According to context:

(a) the terms and conditions described in clause 6A.1.2 (access to transmission services);

(b) the terms and conditions described in clause 6.1.3 (access to *distribution services*).

terrorism event

An act (including, but not limited to, the use of force or violence or the threat of force or violence) of any person or group of persons (whether acting alone or on behalf of in connection with any organisation or government), which from its nature or context is done for, or in connection with, political, religious, ideological, ethnic or similar purposes or reasons (including the intention to

influence or intimidate any government and/or put the public, or any section of the public, in fear) and which *materially* increases the costs to a *Transmission Network Service Provider* of providing *prescribed transmission services* or the costs to a *Distribution Network Service Provider* of providing *direct control services*.

test program

In respect of an *inter-network test*, means the program and co-ordination arrangements for the test including, without limitation:

(1) test procedures;

(2) the proposed timing of the test;

(3) operational procedures to manage *power system security* during the test;

(4) required *power system* conditions for conducting the test;

(5) test facilitation services including, as necessary, *ancillary services* required to achieve those *power system* conditions;

(6) criteria for continuing or concluding a test and the decision-making process relevant to the test; and

(7) contingency arrangements.

tie

Identically priced *dispatch bids* or *dispatch offers*.

time

Eastern Standard Time.

time stamp

The means of identifying the *time* and date at which data is transmitted or received.

timetable

The timetable published by *NEMMCO* under clause 3.4.3 for the operation of the *spot market* and the provision of *market* information.

total capitalised expenditure threshold

Means each of the following amounts:

(a) the total capitalised expenditure in excess of $20 million referred to in the definition of "new large transmission network asset";

(b) the total capitalised expenditure in excess of $5 million referred to in the definition of "new small transmission network asset"; and

(c) the total capitalised expenditure in excess of $5 million referred to in the definition of "replacement transmission network asset".

total capitalised expenditure threshold consultation period

Has the meaning given in clause 5.6.6C(d).

total capitalised expenditure threshold determination

Means a determination made by the *AER* in accordance with clause 5.6.6C(e).

total capitalised expenditure threshold review

Has the meaning given in clause 5.6.6C(a).

total revenue cap

For a *Transmission Network Service Provider* for a *regulatory control period*, the sum of the *maximum allowed revenues* for that provider for each *regulatory year* of that *regulatory control period* as calculated in accordance with clause 6A.5.3 and set out in a *revenue determination*.

total revenue requirement

For a *Distribution Network Service Provider*, an amount representing revenue calculated for the whole of a *regulatory control period* in accordance with Part C of Chapter 6.

Trader

A person who is registered by *NEMMCO* as a *Trader* under Chapter 2.

trading amount

The positive or negative dollar amount resulting from a *transaction*, determined pursuant to clauses 3.15.6, 3.15.6A or 3.15.11.

trading day

The 24 hour period commencing at 4.00 am and finishing at 4.00 am on the following *day*.

trading interval

A 30 minute period ending on the hour (EST) or on the half hour and, where identified by a time, means the 30 minute period ending at that time.

trading limit

A dollar amount for a *Market Participant*, determined pursuant to clause 3.3.10.

trading margin

Has the meaning given in clause 3.3.15.

transaction

A *spot market transaction*, *reallocation transaction* or any other transaction either in the *market* or to which *NEMMCO* is a party.

transformer

A *plant* or device that reduces or increases the *voltage* of alternating current.

transformer tap position

Where a tap changer is fitted to a *transformer*, each tap position represents a change in *voltage* ratio of the *transformer* which can be manually or automatically adjusted to change the *transformer* output *voltage*. The tap position is used as a reference for the output *voltage* of the *transformer*.

transmission

Activities pertaining to a *transmission system* including the conveyance of electricity through that *transmission system*.

transmission consultation procedures

The procedures set out in Part H of Chapter 6A that must be followed by:

(a) the *AER* in making, developing or amending guidelines, models or schemes or in reviewing methodologies; or

(b) the *AEMC* in developing or amending guidelines.

Transmission Customer

A *Customer*, *Non-Registered Customer* or *Distribution Network Service Provider* having a *connection point* with a *transmission network*.

transmission determination

Has the meaning given in the *National Electricity Law*, and includes a determination by the *AER* as described in rule 6A.2.

transmission element

A single identifiable major component of a *transmission system* involving:

(a) an individual *transmission* circuit or a phase of that circuit;

(b) a major item of *transmission plant* necessary for the functioning of a particular *transmission* circuit or *connection point* (such as a *transformer* or a circuit breaker).

transmission line

A power line that is part of a *transmission network*.

transmission network

A *network* within any *participating jurisdiction* operating at nominal *voltages* of 220 kV and above plus:

(a) any part of a *network* operating at nominal *voltages* between 66 kV and 220 kV that operates in parallel to and provides support to the higher voltage *transmission network*;

(b) any part of a *network* operating at nominal *voltages* between 66 kV and 220 kV that is not referred to in paragraph (a) but is deemed by the *AER* to be part of the *transmission network*.

transmission network connection point

A *connection point* on a *transmission network*.

Transmission Network Service Provider

A person who engages in the activity of owning, controlling or operating a *transmission system.*

Transmission Network User

In relation to a *transmission network*, a *Transmission Customer*, a *Generator* whose *generating unit* is directly *connected* to the *transmission network* or a *Network Service Provider* whose *network* is *connected* to the *transmission network.*

transmission network user access

The *power transfer capability* of the *transmission network* in respect of:

(a) *generating units* or group of *generating units*;

(b) *network elements*; or

(c) plant,

at a *connection point* which has been negotiated in accordance with rule 5.4A.

transmission or distribution system

A *transmission system* or *distribution system* that:

1. is used to convey, and control the conveyance of, electricity to customers (whether wholesale or retail); and

2. is *connected* to another such system.

transmission plant

Apparatus or equipment associated with the function or operation of a *transmission line* or an associated *substation* or *switchyard*, which may include *transformers*, circuit breakers, *reactive plant* and *monitoring equipment* and control equipment.

Transmission Ring-Fencing Guidelines

The Guidelines made under rule 6A.21.

transmission service

The services provided by means of, or in connection with, a *transmission system*.

transmission services access dispute

A dispute between a *Transmission Network Service Provider* and a *Service Applicant* as to *terms and conditions of access* for the provision of *prescribed transmission services* or for the provision of *negotiated transmission services* as referred to in clause 6A.1.2, that is for determination by a *commercial arbitrator* under Part K of Chapter 6A.

transmission standard control service

Has the meaning given in rule 6.25(a).

transmission standard control service revenue

Has the meaning given in rule 6.26(b)(1).

transmission system

A *transmission network*, together with the *connection assets* associated with the *transmission network*, which is connected to another *transmission or distribution system*.

transmission use of system, transmission use of system service

A *Generator transmission use of system service* or a *Customer transmission use of system service.*

trigger event

In relation to a *proposed contingent project* or a *contingent project*, a specific condition or event described in clause 6A.8.1(c), the occurrence of which, during the relevant *regulatory control period*, may result in the amendment of a *revenue determination* under clause 6A.8.2.

two-terminal link

One or more *network elements* that together enable the transfer of *energy* between two, and only two, *connection points.*

type 5 accumulation boundary

The volume of *energy* for a *connection point* above which the *metering data* that is extracted or emanates from a type 5 *metering installation* must be extracted or emanate as *interval energy data* for the purpose of producing *settlements ready data*.

[**Note:** Below the type 5 accumulation boundary, the metering data may be extracted or emanate from the metering installation as accumulated energy data for the purpose of producing settlements ready data, in which case the metering installation must be registered with NEMMCO as a type 6 metering installation. Otherwise the metering data may be extracted or emanate as interval energy data for the purpose of producing settlements ready data in which case the metering installation must be registered with NEMMCO as a type 5 metering installation.]

typical accrual

Has the meaning given in clause 3.3.12(a).

uncompleted transaction

Has the meaning given in clause 3.3.16(b).

unconstrained

Free of *constraint*.

under-recovery amount

Any amount by which the sum of the *AARR* in previous *financial years* exceeds the revenue earned from the provision of *prescribed transmission services* in those previous years, grossed up by the application of an annual interest rate approved by the *AER* for this purpose.

unmetered connection point

A *connection point* at which a *meter* is not necessary under schedule 7.2.

unscheduled reserve

The amount of surplus or unused capacity:

(a) of *generating units* (other than *scheduled generating units*); or

(b) arising out of the ability to reduce demand (other than a *scheduled load*).

unscheduled reserve contract

A contract entered into by *NEMMCO* for the provision of *unscheduled reserve* in accordance with rule 3.20.

unserved energy

The amount of *energy* that is demanded, but cannot be supplied, in a *region* and which is defined in accordance with the *power system security and reliability standards* and is expressed as:

(a) GWh; or

(b) a percentage of the total *energy* demanded in that *region* over a specific period of time such as a year.

use of system

Includes *transmission use of system* and *distribution use of system.*

use of system services

Transmission use of system service and *distribution use of system service.*

value of lost load (VoLL)

A price cap on *regional reference prices,* described in clause 3.9.4.

violation

In relation to *power system security*, a failure to meet the requirements of Chapter 4 or the *power system security and reliability standards.*

virtual transmission node

A non-physical node used for the purpose of *market settlements*, having a *transmission loss factor* determined in accordance with clause 3.6.2(b)(3).

voltage

The electronic force or electric potential between two points that gives rise to the flow of electricity.

voltage transformer (VT)

A *transformer* for use with *meters* and/or protection devices in which the *voltage* across the secondary terminals is, within prescribed error limits, proportional to and in phase with the *voltage* across the primary terminals.

WACC

Weighted average cost of capital.

weighted average cost of capital

For a *Transmission Network Service Provider* for a *regulatory control period*, the return on capital for that *Transmission Network Service Provider* for that *regulatory control period* as calculated in accordance with clauses 6A.6.2(b) to

(e), and in any other case an amount determined in a manner consistent with schedule 6.1.

For a *Distribution Network Service Provider* for a *regulatory control period*, the return on capital for that *Distribution Network Service Provider* for that *regulatory control period* calculated in accordance with clause 6.5.2.

CHAPTER 11

11. Savings and Transitional Rules

Part A Negative Inter-Regional Settlements Residue (2006 amendments)

11.1 Rules consequent on making of the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006

11.1.1 Recovery of accrued negative settlements residue

(a) Clause 3.6.5(a)(4), as in force immediately before 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation, continues to apply to any negative *settlements residue* amounts arising before 1 July 2005 and not recovered as at 1 July 2005 until all such negative amounts have been recovered.

(b) Where negative *settlements residue* amounts arise on or after 1 July 2005 and are not recovered before 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation, then:

(i) the whole or any part of the amount may be recovered from the proceeds of the first *auction* after 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation; and

(ii) if the whole or a part of the amount is not recoverable under clause 11.1.1(b)(i), the unrecovered amount may be recovered from the proceeds of successive *auctions* until the negative amount is recovered.

(c) Clause 3.6.5(a)(4A), as in force immediately before 30 June 2009, continues to apply to any *negative settlements* residue amounts arising on or after 1 July 2006 but before 30 June 2009, and not recovered as at 30 June 2009, until all such negative amounts have been recovered.

11.1.2 Recovery of interest costs associated with accrued negative settlements residue

(a) Where interest costs interest costs incurred by *NEMMCO* in relation to any unrecovered negative *settlements residue* amounts referred to in clause 3.6.5(a)(4A) arise on or after 1 July 2005 and are not recovered before 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation, then:

(i) the whole or any part of the interest costs may be recovered from the proceeds of the first *auction* after 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation; and

(ii) if the whole or a part of the interest costs are not recoverable under clause 11.1.2(b)(i), the unrecovered interest costs may be recovered from the proceeds of successive *auctions* until the interest costs are recovered.

(b) Clause 3.6.5(a)(4B), as in force immediately before 30 June 2009, continues to apply to any interest costs arising on or after 1 July 2006 but before 30 June 2009, and not recovered as at 30 June 2009, until all such interest costs have been recovered.

Part B System Restart Ancillary Services (2006 amendments)

11.2 Rules consequent on making of the National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2006 No.6

11.2.1 Transitional provision for acquisition of non-market ancillary services

(a) For the purposes of clause 11.2.1:

Amending Rule means the National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2006.

Existing *NMAS* contract means an *ancillary services agreement* between *NEMMCO* and another person to acquire *non-market ancillary services* from that person, entered into prior to the NMAS commencement date.

NMAS commencement date means the date of commencement of the National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2006;

(b) On the *NMAS* commencement date

(1) Any action taken by *NEMMCO* or a *Rules body* prior to the *NMAS* commencement date in anticipation of the commencement of the Amending Rule is deemed to have been taken for the purpose of the Amending Rule and continues to have effect for that purpose.

(2) *NEMMCO* may continue to acquire *non-market ancillary services* under an existing *NMAS* contract and may extend the period of an

existing *NMAS* contract for such period as *NEMMCO* and that person reasonably determine.

(3) At any time when no *system restart standard* under clause 8.8.3(a)(1a) is in force, *NEMMCO* must develop and *publish* an interim *system restart standard* that is:

(i) consistent with the requirements in clause 8.8.3(a); and

(ii) approved by the *Reliability Panel*;

and the interim *system restart standard* applies until such time as the *Reliability Panel* determines a *system restart standard*.

11.3 [Deleted]

Part C Dispute Resolution for Regulatory Test (2006 amendments)

11.4 Rules consequent on making of the National Electricity Amendment (Dispute Resolution for Regulatory Test) Rule 2006

11.4.1 Continuation of things done under old clause 5.6.6

(a) For the purposes of clause 11.4.1:

amending Rule means the National Electricity Amendment (Dispute Resolution for Regulatory Test) Rule 2006

commencement date means the date of commencement of the amending Rule

new clause 5.6.6 means clause 5.6.6 after the commencement of the amending Rule

old clause 5.6.6 means clause 5.6.6 before the commencement of the amending Rule.

(b) On the commencement date:

(1) any dispute commenced under the old clause 5.6.6 and not completed before the commencement date, must continue to be conducted and completed as if it were a dispute commenced in accordance with the old clause 5.6.6.

(2) Subject to clause 11.4.1(b)(1), any action taken under the old clause 5.6.6 is deemed to have been taken for the purposes of the corresponding requirement in the new clause 5.6.6 and continues to have effect for those purposes.

Part D Metrology (2006 amendments)

11.5 Rules consequential on the making of the National Electricity Amendment (Metrology) Rule 2006

11.5.1 Definitions

For the purposes of this rule 11.5:

Amending Rule means the National Electricity Amendment (Metrology) Rule 2006.

commencement date means the day on which the Amending Rule commences operation.

old Chapter 7 means Chapter 7 of the *Rules* as in force immediately before the commencement date.

new Chapter 7 means Chapter 7 of the *Rules* as in force immediately after the commencement date.

11.5.2 Metrology procedures continues to apply until 31 December 2006

A metrology procedure as in force under the old Chapter 7 continues in force in accordance with the old Chapter 7 until 31 December 2006.

11.5.3 Responsible person

A *Local Network Service Provider* who is the responsible person for a *metering installation* under Chapter 9 of the *Rules* immediately before the commencement date continues to be the *responsible person* for that *metering installation* for the purposes of clause 7.2.3.

11.5.4 NEMMCO's responsibility to develop a metrology procedure

(a) Subject to this clause 11.5.4, *NEMMCO* must *publish* an initial metrology procedure by 1 January 2007 in accordance with the new Chapter 7 and this procedure must commence operation on 1 January 2007.

(b) The requirement in clause 7.14.1(b) that requires a minimum period of 3 months between the date the *metrology procedure* is published and the date the *metrology procedure* commences does not apply to the initial metrology procedure developed and published under this clause 11.5.4.

(c) Any action taken by *NEMMCO* for the purpose of developing and publishing an initial metrology procedure prior to the commencement date is taken to satisfy the equivalent actions required for a *metrology procedure* under the new Chapter 7.

(d) *NEMMCO* may dispense with, or not comply with, any relevant action under rule 7.14, if the action duplicates or is consistent with action that has already been taken under paragraph (c).

(e) An initial metrology procedure developed and published under this clause 11.5.4 is taken to be the *metrology procedure* for the purposes of Chapter 7 of the *Rules*.

(f) The initial metrology procedure is not required to incorporate the matters referred to in clause 7.14.1(c)(4) until 30 June 2008 and *NEMMCO* may develop a separate procedure for those matters during that period to 30 June 2008.

11.5.5 Jurisdictional metrology material in the metrology procedure

(a) For the purposes of this clause 11.5.5, **expiry date** means 1 January 2009.

(b) Until the expiry date, the *Ministers of the MCE* is taken to be each *Minister of the participating jurisdictions*, acting on behalf of that jurisdiction and undertaking the role of the *Ministers of the MCE* in relation to *jurisdictional metrology material* under clause 7.14.2.

(c) For the avoidance of doubt, a *Minister of a participating jurisdiction* may delegate the role of submitting *jurisdictional metrology material* to *NEMMCO* under paragraph (b) by instrument in writing.

(d) A certified copy of any delegation given under paragraph (c) must be provided to *NEMMCO* at the time any *jurisdictional metrology material* is submitted to *NEMMCO* under clause 7.14.2.

[**Note:** Ministers of participating jurisdiction have powers of delegation under their own jurisdictional legislation governing the procedure for conferring such delegations.]

Part E Economic Regulation of Transmission Services (2006 amendments)

11.6 Rules consequent on making of the National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006

11.6.1 Definitions

Subject to this rule 11.6, in this rule 11.6:

Amending Rule 2006 means the National Electricity Amendment (Economic Regulation of Transmission Services) Rule 2006.

commencement date means the date on which the *Amending Rule* 2006 commences operation.

current regulatory control period means the regulatory control period applicable to an existing revenue determination.

distribution matters includes matters relating to the economic regulation of *distribution services*, including, but not limited to, existing determinations, decisions, instruments, agreements or any other relevant action.

ElectraNet means ElectraNet Pty Ltd ACN 094 482 416 trading as ElectraNet.

existing revenue determination means any determination made, or deemed to be made, by the *ACCC* or the *AER* on or prior to the commencement date for the purpose of regulating the revenues of a *Transmission Network Service Provider*.

first regulatory control period means a *regulatory control period* immediately after a current regulatory control period.

first revenue cap determination means the first *revenue cap determination* after an existing revenue cap determination.

new Chapter 6A means Chapter 6A of the *Rule*s as in force immediately after the commencement of the *Amending Rule* 2006.

old Chapter 6 means Chapter 6 of the *Rules* as in force immediately before the commencement of the *Amending Rule* 2006.

old clause 6.5.9 means clause 6.5.9 of the *Rules* as in force immediately before the commencement of the *Amending Rule* 2006.

old Part C means Part C (Transmission Pricing) of Chapter 6 of the *Rules* as in force immediately before the commencement of the *Amending Rule* 2006.

old Part F means Part F (Interconnections) of Chapter 6 of the *Rules* as in force immediately before the commencement of the *Amending Rule* 2006.

relevant action includes (without limitation) any of the following actions in relation to *distribution* matters:

(a) the performance or exercise of any function, power, obligation or right;

(b) the making or publishing of any guideline, standard, procedure, report, negotiating framework or other document;

(c) the giving, publishing, service or receipt of any communication, notice or other document;

(d) the provision or receipt of any submission or information;

(e) the making or receiving any inquiry, request or application;

(f) the undertaking or completion of any transaction;

(g) the payment of any monetary amount or fee.

renumbered Chapter 6 means Chapter 6 of the *Rules* as in force immediately after the commencement of the *Amending Rule* 2006.

SP AusNet means SPI PowerNet Pty Ltd ACN 079 798 173.

Statement of Regulatory Principles means the Statement of Principles published by the *AER* as part of the Compendium of Electricity Transmission Regulatory Guidelines dated August 2005.

VENCorp means the Victorian Energy Networks Corporation established under the Gas Industry Act 1994 (Vic) and continued under the Gas Industry Act 2001 (Vic).

11.6.2 New Chapter 6A does not affect existing revenue determinations

(a) Subject to this rule 11.6, the old Chapter 6 continues to apply to and in respect of, existing revenue determinations as if the new Chapter 6A had not been made.

(b) The Amending Rule 2006 has no effect on the continuing operation of clause 9.8.4G.

(c) The Amending Rule 2006 has no effect on the continuing operation of clause 9.16.5 in so far as it:

(1) applies to deem a revenue cap for the *financial year* commencing on 1 July 2004;

(2) specifies the basis on which prices for certain transmission services during the *financial year* commencing on 1 July 2004 are to be determined;

(3) specifies the manner in which clause 6.4.3C of the old Chapter 6 is to apply for the *financial year* commencing on 1 July 2005; and

(4) deems a revenue cap for the period commencing on 1 July 2004 until the end of 30 June 2009 to be for a period of five years.

11.6.3 Old Part C and Schedules 6.2, 6.3, 6.4, 6.7 and 6.8 of old Chapter 6

Subject to this rule 11.6 and rule 11.8, old Part C (including Schedules 6.2, 6.3, 6.4, 6.7 and 6.8) continues to apply for the duration of a current regulatory control period.

11.6.4 Old Part F of Chapter 6

Subject to this rule 11.6, old Part F of Chapter 6 continues to apply for the duration of a current regulatory control period.

11.6.5 Application of new Chapter 6A to Transmission Network Service Providers

Subject to this rule 11.6, a *Transmission Network Service Provider* is not required to submit a *Revenue Proposal* or a proposed *negotiating framework* to the *AER* under the new Chapter 6A until a date that is 13 months before the expiry of a current regulatory control period.

11.6.6 Application of Chapter 6 to old distribution matters

(a) The restructuring and renumbering of provisions of the old Chapter 6 by the *Amending Rule* 2006 does not affect:

(1) *distribution* matters occurring or in existence before the commencement date; or

(2) anything done or omitted to be done in respect of *distribution* matters before the commencement date.

(b) Without limiting paragraph (a), anything done or omitted to be done under a provision of the old Chapter 6 in respect of *distribution* matters before the commencement date is deemed to have been done or omitted to be done under the corresponding provision of that Chapter as restructured and renumbered by the *Amending Rule* 2006, as if that Rule had been in operation when the thing was done or omitted to be done.

11.6.7 References to the old Chapter 6

Unless the context otherwise requires, on and from the commencement date every reference to the old Chapter 6 in a document (however described) is deemed to be a reference to the renumbered Chapter 6 or the new Chapter 6A (as the case may be).

11.6.8 References to provisions of the old Chapter 6

Unless the context otherwise requires, on and from the commencement date every reference to a provision of the old Chapter 6 in a document (however described) is deemed to be a reference to the corresponding provision of the renumbered Chapter 6 or the corresponding provision (if any) of the new Chapter 6A (as the case may be).

11.6.9 Roll forward of regulatory asset base for first regulatory control period

In making a *revenue determination* for the first *regulatory control period*, the value of the regulatory asset base at the beginning of the first *regulatory year* of that period calculated in accordance with clause S6A.2.1(f), may be adjusted having regard to an existing revenue determination and any other arrangements agreed between the *AER* and the *Transmission Network Service Provider*.

11.6.10 Other adjustment carry-over mechanisms from current to first regulatory control period

The *maximum allowed revenue* that a *Transmission Network Service Provider* may earn in any *regulatory year* of the first *regulatory control period* may be adjusted for any carry-over mechanisms provided for in the relevant existing revenue determination and in any other arrangements agreed between the *AER* and the *Transmission Network Service Provider* for the purposes of, and in accordance with, the existing revenue determination.

11.6.11 Transition to new Chapter 6A: existing prescribed transmission services

(a) References to *prescribed transmission services* in the new Chapter 6A include a service provided by an asset used in connection with, or committed to be constructed for use in connection with, a *transmission system* as at 9 February 2006:

(1) to the extent that the value of the asset is included in the regulatory asset base for that *transmission system* under an existing revenue determination in force at that time; or

(2) if the price for that service has not been negotiated under a negotiating framework established pursuant to old clause 6.5.9,

and, but for this clause, that service would not otherwise be a *prescribed transmission service*.

(b) Where a service is a *prescribed transmission* service by virtue of the operation of this clause, that service is taken not to be a *negotiated transmission service*.

(c) For the purposes of this clause 11.6.11, an asset is, and is only, to be taken to be committed to be constructed if it satisfies the criteria which a project needs to satisfy to be a "committed project" for the purposes of the *regulatory test*.

11.6.12 Powerlink transitional provisions

Definitions

(a) In this clause 11.6.12:

contingent project means a project identified in the transitional revenue determination as a contingent project.

Powerlink means the Queensland Electricity Transmission Corporation Limited (ACN 078 849 233), trading as Powerlink Queensland .

transitional regulatory control period means the regulatory control period commencing on 1 July 2007 and ending on 30 June 2012.

transitional revenue determination means a final revenue determination by the *AER* for the Powerlink transmission network, in respect of the transitional regulatory control period.

trigger means the unique investment driver identified in the transitional revenue determination as a trigger for a contingent project.

Scope and application

(b) This clause 11.6.12:

(1) applies only in respect of the Powerlink *transmission network* and applies only until 30 June 2012; and

(2) prevails, to the extent of any inconsistency, over any other clause in the *Rules*.

Transitional revenue determination

(c) Except as provided in this clause 11.6.12, and despite any changes to the old Chapter 6:

(1) the old Chapter 6 continues to apply in respect of the *AER* setting the revenue cap for the transitional regulatory control period for the Powerlink *transmission network*; and

(2) in setting the revenue cap for the transitional regulatory control period, the *AER* must substantially adhere to the Statement of Regulatory Principles including the ex ante approach to setting the revenue cap set out in the statement.

(d) The *AER* must calculate the *weighted average cost of capital* for the transitional regulatory control period, in accordance with the values,

methodologies or benchmarks in the new Chapter 6A, in respect of the following items:

(1) the nominal risk free rate including the maturity period and source of the benchmark;

(2) the debt risk premium including the maturity period and source of the benchmark;

(3) the equity beta;

(4) the market risk premium; and

(5) the ratio of the market value of debt as a proportion of the market value of equity and debt.

(e) In calculating the *WACC* for the transitional regulatory control period, the *AER* must use an average gamma of 0.5.

Contingent projects

(f) Where the trigger event identified in respect of a contingent project occurs prior to 30 June 2012, the *AER* must, in accordance with the transitional revenue determination:

(1) determine:

(i) the amount of capital and incremental operating expenditure for that contingent project for each remaining regulatory year of the transitional regulatory control period, which the *AER* considers is reasonably required for the purpose of undertaking the contingent project;

(ii) the likely commencement and completion dates for the contingent project;

(iii) the incremental revenue which is likely to be earned by Powerlink in each remaining regulatory year of the transitional regulatory control period as a result of the contingent project being undertaken; and

(iv) the *maximum allowed revenue* for each regulatory year in the remainder of the transitional regulatory control period by adding the incremental revenue for that regulatory year; and

(2) calculate the estimate referred to in subparagraph (1)(iii):

(i) on the basis of the rate of return for Powerlink for the transitional regulatory control period in accordance with the transitional revenue determination; and

(ii) consistently with the manner in which depreciation is calculated under the transitional revenue determination; and

(3) amend the transitional revenue determination to apply for the remainder of the transitional regulatory control period in accordance with paragraph (g).

(g) The *AER* may only vary the transitional revenue determination to the extent necessary:

(1) to adjust the forecast capital expenditure for the transitional regulatory control period to accommodate the amount of additional capital expenditure determined under paragraph (f)(1)(i);

(2) to adjust the forecast operating expenditure for the current regulatory control period to accommodate the amount of additional operating expenditure determined under paragraph (f)(1)(i); and

(3) to reflect the effect of any resultant increase in forecast capital expenditure and incremental operating expenditure on the maximum allowed revenue for each regulatory year in the remainder of the transitional regulatory control period.

(h) An application for approval of a contingent project may only be made if the intended date for commencing the contingent project is during the transitional regulatory control period.

(i) For the first *regulatory control period* after the transitional regulatory control period, the forecast of capital expenditure for that first *regulatory control period* must be determined by applying the provisions of clause 6A.6.7 of the new Chapter 6A, in respect of the capital expenditure for a contingent project, with such modifications as are necessary to properly apply clause 6A.6.7.

Cost pass-through

(j) For the duration of the transitional regulatory control period:

(1) subject to subparagraph (2), clause 6A.7.2 of the new Chapter 6A applies to a *network support event* under the transitional revenue determination;

(2) the process to apply to the calculation, presentation and approval of pass through resulting from a network support event is as set out in the transitional revenue determination; and

(3) in respect of any *positive change event* or *negative change event*, the new Chapter 6A applies, with any modifications that are necessary to apply the relevant provisions to the transitional revenue determination.

Roll forward of regulatory asset base

(k) For the avoidance of doubt, in making a *revenue determination* for the first *regulatory control period* after the transitional regulatory control period, the value of the regulatory asset base at the beginning of the first *regulatory year* of that period calculated in accordance with clause S6A.2.1(f), may be adjusted having regard to the transitional revenue determination and any other arrangements agreed between the *AER* and Powerlink.

Application of efficiency benefit sharing scheme

(l) The *efficiency benefit sharing scheme* in force under clause 6A.6.5 applies to Powerlink during the transitional regulatory control period.

Power to re-open transitional revenue determination

(m) Clause 6A.7.1 applies to the transitional revenue determination, and a reference in the clause to:

(1) "revenue determination" is taken to be a reference to the transitional revenue determination;

(2) "regulatory control period" is taken to be a reference to the transitional regulatory control period;

(3) "contingent project" has the meaning referred to in paragraph (a); and

(4) "X Factor" has the same meaning as in the transitional revenue determination.

(n) Subject to rule 11.8, old Part C (including Schedules 6.2, 6.3, 6.4, 6.7 and 6.8 of old Chapter 6) continues to apply for the duration of the transitional regulatory control period

11.6.13 ElectraNet easements transitional provisions

(a) In this clause 11.6.13:

current regulatory control period means the regulatory control period for ElectraNet commencing on 1 January 2003 and ending on 30 June 2008.

Determination means the South Australian Transmission Network Revenue Cap Decision of the *ACCC* dated 11 December 2002.

easement means easements referred to in the Determination.

(b) Without limiting the operation of the new Chapter 6A, in establishing the opening regulatory asset base for ElectraNet for the regulatory control period subsequent to ElectraNet's current regulatory control period, the *AER* may also consider adjustments to the regulatory asset base for ElectraNet that relate to easements, as agreed by letter dated 3 August 2004, between the *ACCC* and ElectraNet.

11.6.14 TransGrid contingent projects

(a) In this clause 11.6.14:

contingent project means a project identified in the Determination as a contingent project.

current regulatory control period means the period 1 July 2004 to 30 June 2009.

Determination means the "Final Decision, NSW and ACT Transmission Network Revenue Cap TransGrid 2004-05 to 2008-09" dated 27 April 2005 determined by the *ACCC* pursuant to clause 6.2.4(b) of the National Electricity Code.

TransGrid means the energy services corporation constituted under section 6A of the Energy Services Corporations Act 1995 (NSW) and specified in Part 1A of Schedule 1 to that Act.

(b) For the purposes of the application of clause 11.6.2(a) to the Determination, a reference to the old Chapter 6 is a reference to the old Chapter 6 as modified by rule 8A.1.

(c) For the first *regulatory control period* after the current regulatory control period, the forecast of capital expenditure for TransGrid for that first *regulatory control period* must be determined by applying the provisions of clause 6A.6.7 in respect of the capital expenditure for a contingent project, with such modifications as are necessary to properly apply clause 6A.6.7.

11.6.15 Transmission determination includes existing revenue determinations

The definition of a *transmission determination* may, where the context so requires, include a determination (or substituted determination) made, or deemed to be made, by the *AER* or the *ACCC* prior to the commencement date.

11.6.16 References to regulatory control period

A reference to a *regulatory control period* may, where the context so requires, include a period during which a revenue cap applied by virtue of a determination

(or substituted determination) made, or deemed to be made, by the *AER* or the *ACCC* prior to the commencement date.

11.6.17 Consultation procedure for first proposed guidelines

(a) In this clause 11.6.17:

guideline means:

(1) the *post-tax revenue model* referred to in rule 6A.5.2;

(2) the *roll forward model* referred to in rule 6A.6.1;

(3) an *efficiency benefit sharing scheme* referred to in rule 6A.6.5;

(4) a *service target performance incentive scheme* referred to in rule 6A.7.4;

(5) *submission guidelines* referred to in rule 6A.10.2; and

(6) *Cost Allocation Guidelines* referred to in rule 6A.19.3.

(b) The *AER* must develop and *publish* the first proposed guidelines on or before 31 January 2007, and may carry out consultation in the preparation of those proposed guidelines as the *AER* considers appropriate.

(c) Each proposed guideline must be *published* in accordance with the requirements of rule 6A.20(b), including an explanatory statement and an invitation for written submissions.

(d) The invitation for written submissions for the proposed guidelines must allow no less than 60 *business days* for the making of submissions.

(e) The *AER* may *publish* papers and hold conferences or information sessions in relation to the proposed guidelines as provided by rule 6A.20(d).

(f) Rule 6A.20(e)-(f) applies to the publication of the final decision of the *AER* in relation to the first guidelines, which must be published under rule 6A.20 on or before 30 September 2007.

11.6.18 Reliance on proposed guidelines for SP AusNet, VENCorp and ElectraNet

(a) In this clause 11.6.18:

guideline has the same meaning as in clause 11.6.17.

proposed guideline means a proposed guideline published under clause 11.6.17.

relevant provider means SP AusNet, VENCorp or ElectraNet.

2008 determination means a transmission determination to be made in 2008 for a relevant provider.

(b) For the purposes of making a 2008 determination for the regulatory control period to be covered by a 2008 determination, anything that must be done in accordance with a guideline must instead be done in accordance with the corresponding proposed guideline.

(c) Unless sooner revoked, a proposed guideline ceases to have effect in relation to a relevant provider at the end of the regulatory control period covered by a 2008 determination applying to the provider. For the avoidance doubt, a proposed guideline does not apply to or in respect of the making of a subsequent transmission determination.

(d) For the purposes of making a 2008 determination for the regulatory control period to be covered by a 2008 determination, a relevant provider is taken to have complied with a requirement to comply with a *Cost Allocation Methodology* under the new Chapter 6A if the *AER* is satisfied that the relevant provider has complied with the relevant proposed guideline for cost allocation referred to in clause 11.6.17(a)(6), but only until the *AER* has approved a *Cost Allocation Methodology* for that provider under clause 6A.19.4.

11.6.19 EnergyAustralia transitional provisions

(a) In this clause 11.6.19:

contingent project means a project approved by the *ACCC* and identified in the Determination as a contingent project.

current regulatory control period means the period 1 July 2004 to 30 June 2009.

Determination means the "Final Decision, NSW and ACT Transmission Network Revenue Cap EnergyAustralia 2004-05 to 2008-09".

EnergyAustralia means the energy services corporation constituted under section 7 of the Energy Services Corporations Act 1995 (NSW) and specified in Part 2 of Schedule 1 to that Act.

maximum allowed revenue means the maximum allowed revenue in the Determination.

trigger event means an event identified as a trigger in Appendix A of the Determination in respect of a contingent project.

triggered contingent project means the contingent project referred to in Appendix A of the Determination as "A.1 Replacement of Feeders 908/909".

Application of Chapter 6A to Determination

(b) Subject to paragraph (c), clauses 6A.7.1, 6A.7.2 and 6A.7.3 apply to the Determination from the commencement date.

(c) In applying clause 6A.7.1 to the Determination, a reference in the clause to:

(1) "revenue determination" is taken to be a reference to the Determination;

(2) "regulatory control period" is taken to be a reference to the current regulatory control period;

(3) "contingent project" has the meaning referred to in paragraph (a); and

(4) "X Factor" has the same meaning as in the Determination.

Treatment of contingent projects

(d) Where the trigger event identified in respect of a contingent project occurs prior to 1 July 2009, the *AER* must, in accordance with the Determination:

(1) determine:

(i) the total capital expenditure which the AER considers is reasonably required for the purpose of undertaking the *contingent project* including any amount for forecast capital expenditure already included in the Determination in respect of the triggered contingent project;

(ii) the forecast capital and incremental operating expenditure for that contingent project (in addition to any amount for forecast capital expenditure already included in the Determination in respect of the triggered contingent project) for each remaining regulatory year of the current regulatory control period, which the *AER* considers is reasonably required for the purpose of undertaking the contingent project in accordance with Appendix A of the Determination;

(iii) the likely commencement and completion dates for the contingent project;

(iv) the incremental revenue which is likely to be earned by EnergyAustralia in each remaining regulatory year of the current

regulatory control period as a result of the contingent project being undertaken; and

(v) the maximum allowed revenue for each regulatory year in the remainder of the current regulatory control period by adding the incremental revenue for that regulatory year;

(2) calculate the estimate referred to in subparagraph (1)(iv) in accordance with the Determination, including:

(i) on the basis of the rate of return for EnergyAustralia for the current regulatory control period; and

(ii) consistently with the manner in which depreciation is calculated under the Determination; and

(3) vary the Determination to apply for the remainder of the current regulatory control period in accordance with paragraph (e).

(e) The *AER* may only vary the Determination to the extent necessary:

(1) to adjust the forecast capital expenditure for the current regulatory control period to accommodate the amount of additional capital expenditure determined under paragraph (d)(1)(ii); and

(2) to adjust the forecast operating expenditure for the current regulatory control period to accommodate the amount of additional operating expenditure determined under paragraph (d)(1)(ii); and

(3) to reflect the effect of any resultant increase in forecast capital expenditure and incremental operating expenditure on the maximum allowed revenue for each regulatory year in the remainder of the current regulatory control period.

(f) The intended date for commencing the contingent project must be during the current regulatory control period.

(g) For the first *regulatory control period* after the current regulatory control period, the forecast of capital expenditure for EnergyAustralia for that first *regulatory control period* must be determined by applying the provisions of clause 6A.6.7 in respect of the capital expenditure for a contingent project, with such modifications as are necessary to properly apply clause 6A.6.7.

11.6.20 Basslink transitional provisions

Definitions

(a) In this clause 11.6.20:

Basslink has the meaning provided in the *Electricity Supply Industry Act 1995* of Tasmania, and means the interconnection between the electricity grids of the States of Tasmania and Victoria by means of:

(1) a high voltage, direct current, submarine cable across Bass Strait;

(2) converter stations in those States;

(3) direct current connecting lines to those converter stations;

(4) alternating current transmission connections to the transmission networks of those States; and

(5) related infrastructure.

previous regulatory approach means the methodologies, objectives and principles for determination of a regulatory asset base applied in the previous regulatory determinations.

previous regulatory determinations means the decision (including the reasons for decision) made under clause 2.5.2(c) of the National Electricity Code or clause 2.5.2(c) of the *Rules* (as the case may be):

(1) by the *ACCC*, entitled the "Murraylink Transmission Company Application for Conversion and Maximum Allowable Revenue" dated 1 October 2003; and

(2) by the *AER*, entitled "Directlink Joint Ventures' Application for Conversion and Revenue Cap" dated 3 March 2006.

Application

(b) Where, after the commencement date, a service provided by means of, or in connection with, the Basslink *transmission system* ceases to be classified as a *market network service*:

(1) paragraph (c) applies to that service to the exclusion of clause 2.5.2(c); and

(2) paragraphs (d),(e),(f) and (g) apply to that service to the exclusion of clause S6A.2.1(e)(1) and (2).

(c) If, after the commencement date, a *network service* provided by means of, or in connection with, the Basslink *transmission system* ceases to be classified as a *market network service*, it may at the discretion of the *AER* be determined to be a *prescribed transmission service*, in which case the relevant *total revenue cap* may be adjusted in accordance with Chapter 6A and this clause 11.6.20 to include to an appropriate extent the relevant *network* elements which provide those *network services*.

(d) Where services are determined to be *prescribed transmission services* as referred to in paragraph (c), the value of the regulatory asset base, as at the beginning of the first *regulatory year* of the first *regulatory control period* for which those *prescribed transmission services* are to be regulated under a *revenue determination*, is the amount that is determined by the *AER* in accordance with paragraphs (e), (f) and (g).

(e) Subject to paragraph (f), the *AER* must determine the value of the regulatory asset base for the Basslink *transmission system* for the purposes of paragraph (d) by applying the previous regulatory approach to the circumstances of that *transmission system*.

(f) In the event of an inconsistency between the previous regulatory approach adopted in each of the previous regulatory determinations, the approach adopted in a decision of the *AER* regarding the Directlink *transmission system* prevails over the approach adopted in the decision of the *ACCC* regarding the Murraylink *transmission system* to the extent of the inconsistency.

(g) Without limiting paragraph (e), the *AER* must, when exercising any discretion in relation to the application of paragraph (e) above:

(1) have regard to the prudent and efficient value of the assets that are used by the relevant *Transmission Network Service Provider* to provide those *prescribed transmission services* (but only to the extent that those assets are used to provide such services); and

(2) for this purpose, determine that value having regard to the matters referred to in clause S6A.2.2.

11.6.21 SPI Powernet savings and transitional provision

Definitions

(a) In this clause 11.6.21:

easements tax change event means a change in the amount of land tax that is payable by SPI PowerNet in respect of the easements which are used for the purposes of SPI PowerNet's *transmission network* where that change results in SPI PowerNet incurring higher or lower costs in providing *prescribed transmission services* than it would have incurred but for that event. For these purposes the change in the amount of land tax that is payable by SPI PowerNet must be calculated by applying the relevant land tax rate to the difference between:

(1) the value of the easements which is used for the purposes of assessing the land tax that is payable; and

(2) the value of the easements which is assumed for the purposes of the *revenue determination* for the *regulatory control period*,

and an easements tax change event does not include an event described in paragraphs (a), (b) or (c) of the definition of *tax change event*.

Regulated owner and **SPI PowerNet** both have the meaning provided in clause 9.3.1(2) of the *Rules*.

Transition to new Chapter 6A: existing prescribed transmission services

(b) Notwithstanding clause 11.5.11, references to *prescribed transmission services* in the new Chapter 6A include a service provided by an asset used in connection with, or committed to be constructed for use in connection with, a *transmission system* as at 9 February 2006, where that asset is the subject of an agreement between SPI PowerNet and any of:

(1) VENCorp;

(2) a Distributor;

(3) a Regulated owner;

(4) a *Generator*; or

(5) a *Market Network Service Provider*,

and:

(6) the agreement provides or contemplates that following an interim period the relevant asset will become subject to regulation under a revenue determination applicable to SPI PowerNet; and

(7) in the case of an agreement with a *Generator* or a *Market Network Service Provider*, the service the subject of the agreement is for *connection assets* provided on a non-contestable basis.

Method of adjustment of value of regulatory asset base

(c) For the avoidance of doubt, in adjusting the previous value of the regulatory asset base for SPI PowerNet's *transmission system* as required by clause S6A.2.1(f), the previous value of the regulatory asset base must be increased by the amount of capital expenditure specified in, or that forms the basis of, agreements pursuant to which SPI PowerNet constructed assets during the previous regulatory control period used to provide *prescribed transmission services*, adjusted for outturn inflation and depreciation in accordance with the terms of those agreements.

(d) For the purposes of a *revenue determination* for SPI PowerNet (including but not limited to, a 2008 determination as defined in clause 11.6.18(a)), a *pass through event* includes an easements tax change event.

11.6.22 Interim arrangements pricing-related information

(a) Clause 6.2.5(a1) as in force immediately before the commencement date continues to apply during the current regulatory control period.

(b) The *information guidelines* may, in addition to the matter referred to in clause 6A.17.2(e), require the inclusion in the certified annual statements of:

(1) information on the amount of each instance, during the relevant reporting period, of any reduction in the prices payable by a *Transmission Customer* for *prescribed transmission services* provided by the *Transmission Network Service Provider*;

(2) information on each instance, during the relevant reporting period, of a reduction in the prices payable by a *Transmission Customer* for *prescribed transmission use of system services* or *prescribed common transmission services* (or both) that were recovered from other *Transmission Customers* for *prescribed transmission use of system services* or *prescribed common transmission services*; and

(3) information to substantiate any claim by the *Transmission Network Service Provider* that the information provided to the *AER* with respect to reductions in the prices payable by a *Transmission Customer* for the relevant *prescribed transmission services* under subparagraphs (2) or (3) is confidential information.

Part F Reform of Regulatory Test Principles (2006 amendments)

11.7 Rules consequent on making of the National Electricity Amendment (Reform of the Regulatory Test Principles) Rule 2006 No.19

11.7.1 Definitions

For the purposes of this rule 11.7:

Amending Rule means the National Electricity Amendment (Reform of the Regulatory Test Principles) Rule 2006 No.19.

commencement date means the date on which the Amending Rule commences operation.

current application means any action taken or process commenced under the *Rules*, which relies on or is referenced to, the *regulatory test*, and is not completed as at the commencement date.

new clause 5.6.5A means clause 5.6.5A of the *Rules* as in force immediately after the commencement of the Amending Rule.

old clause 5.6.5A means clause 5.6.5A of the *Rules* as in force immediately before the commencement of the Amending Rule.

transitional application means any action taken or process commenced under the *Rules*, which relies on or is referenced to, the *regulatory test* and is not completed on 31 December 2007, or the date on which amendments (if any) to the *regulatory test* commence, whichever is the earlier.

11.7.2 Amending Rule does not affect old clause 5.6.5A

(a) On the commencement date, the *regulatory test* promulgated by the *AER* in accordance with the old clause 5.6.5A and in effect immediately before the commencement date, continues in effect and is taken to be consistent with the new clause 5.6.5A until 31 December 2007.

(b) Old clause 5.6.5A, and the *regulatory test* promulgated under that clause 5.6.5A, continues to apply to and in respect of, any current application and any transitional application.

Part G Pricing of Prescribed Transmission Services (2006 amendments)

11.8 Rules consequent on making the National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006

11.8.1 Definitions

Subject to this rule 11.8, in this rule 11.8:

agreed interim requirements means interim requirements that are equivalent to the requirements of the *pricing methodology guidelines* referred to in rule 6A.25 and have been developed in consultation with the relevant providers for the purposes of a proposed 2008 pricing methodology.

ElectraNet means ElectraNet Pty Ltd ACN 094 482 416 trading as ElectraNet.

existing assets means *transmission system* assets in existence as at 24 August 2006.

previous regulatory determinations means the decision (including the reasons for decision) made under clause 2.5.2(c) of the National Electricity Code or clause 2.5.2(c) of the *Rules* (as the case may be):

(1) by the *ACCC*, entitled the "Murraylink Transmission Company Application for Conversion and Maximum Allowable Revenue" dated 1 October 2003; and

(2) by the *AER*, entitled "Directlink Joint Ventures' Application for Conversion and Revenue Cap" dated 3 March 2006.

Pricing Rule commencement date means the date on which the National Electricity Amendment (Pricing of Prescribed Transmission Services) Rule 2006 commences operation.

relevant provider means SPAusNet, ElectraNet or VENCorp.

SPAusNet means SPI PowerNet Pty Ltd ACN 079 798 173.

2008 pricing methodology means a pricing methodology to be made in 2008 for a relevant provider.

VENCorp means the Victorian Energy Networks Corporation established under the Gas Industry Act 1994(Vic) and continued under the Gas Industry Act 2001(Vic).

11.8.2 Regulated interconnectors

(a) All *interconnectors* that formed part of the *power system* in the *participating jurisdictions* as at 31 December 1997 continue to be taken to be *regulated interconnectors*.

(b) All *interconnectors* that ceased to be classified as a *market network service* by a previous regulatory determination made before 28 December 2006 are taken to be *regulated interconnectors*.

(c) All *interconnectors* that, by a decision made after 28 December 2006 under clause 2.5.2(c) of the *Rules* cease to be classified as a *market network service* are taken to be *regulated interconnectors*.

11.8.3 Application of new Part J of Chapter 6A to Transmission Network Service Providers

(a) Subject to this rule 11.8, a *Transmission Network Service Provider* is not required to submit a proposed *pricing methodology* to the *AER* under the new Part J of Chapter 6A until a date that is 13 months before the expiry of a current *regulatory control period*.

(b) For the purposes of this clause 11.8.3, the transitional regulatory control period referred to in rule 11.6.12 (a) for Powerlink is taken to be the current *regulatory control period.*

11.8.4 Reliance on agreed interim guideline for ElectraNet, SPAusNet, and VenCorp

For the purpose of making a 2008 pricing methodology, anything that must be done in accordance with the *pricing methodology guidelines* must instead be done in accordance with the agreed interim requirements.

11.8.5 Prudent discounts under existing agreements

(a) A *Transmission Network Service Provider* may continue to recover discounts arising as a result of agreements that were entered into prior to 10 October 2001 so long as the agreement remains in effect and its terms are not renegotiated.

(b) A *Transmission Network Service Provider* may continue to recover discounts arising as a result of agreements that were entered into prior to 28 December 2006 so long as the agreement remains in effect and its terms are not renegotiated.

(c) The *AER* is not required to re-approve discounts arising under paragraphs (a) or (b) that were approved prior to 28 December 2006, and any approval for the recovery of such discounts 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.

11.8.6 Application of prudent discounts regime under rule 6A.26

(a) Despite clause 11.6.3, a *Transmission Network Service Provider* may apply rule 6A.26 during a current regulatory control period (as defined in clause 11.6.1).

(b) Where a *Transmission Network Service Provider* applies to the *AER* under clause 6A.26.2 for approval to recover a proposed recovery amount in circumstances where paragraph (a) applies, the *AER* must make a determination in accordance with clause 6A.26.2 notwithstanding that there is no approved *pricing methodology* for that provider.

11.8.7 Prudent discounts pending approval of pricing methodology

(a) This clause 11.8.7 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; and

(3) a *Transmission Customer* requests the provider to charge lower prices for *prescribed TUOS services* or *prescribed common transmission services* than the prices determined in accordance with the provider's *pricing methodology* as referred to in clause 6A.26.1(d).

(b) Despite clause 6A.26.1, a *Transmission Network Service Provider* may agree to charge lower prices for *prescribed TUOS services* or *prescribed common transmission services* than the prices determined as referred to in clause 6A.26.1(d) 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*; or

(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); or

(3) if there is no a 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) Where a *Transmission Network Service Provider* applies to the *AER* under clause 6A.26.2 for approval to recover a proposed recovery amount in circumstances where paragraphs (a) and (b) apply, the *AER* must make a determination in accordance with clause 6A.26.2 notwithstanding that the reduced charges were agreed before a *pricing methodology* was approved.

(d) The subsequent approval by the *AER* of a *pricing methodology* for a *Transmission Network Service Provider* does not require the provider to adjust, reverse or recompense any amounts to *Transmission Customers* in connection with charges for services established pursuant to this clause 11.8.7.

Part H Reallocations (2007 amendments)

11.9 Rules consequent on the making of the National Electricity Amendment (Reallocations) Rule 2007

11.9.1 Definitions

For the purposes of this rule 11.9:

Amending Rule means the National Electricity Amendment (Reallocations) Rule 2007.

commencement date means the day on which the Amending Rule commences operation.

existing reallocation means a *reallocation* in place immediately before the commencement date.

new reallocation means a *reallocation* undertaken in accordance with the *Rules* after the date of *publication* of the *reallocation procedures* under clause 3.15.11A(d).

transitional reallocation means a *reallocation* in place immediately after the commencement date but prior to the date of *publication* of the *reallocation procedures* by *NEMMCO* under clause 3.15.11A(d).

11.9.2 Existing and transitional reallocations

(a) Subject to paragraph (c), an existing reallocation is to be treated as if the Amending Rule had not been made.

(b) Subject to paragraph (c), a transitional reallocation is to be treated as if the Amending Rule had not been made.

(c) A *Market Participant* who is a party to an existing reallocation or a transitional reallocation may elect to have the reallocation treated as a new reallocation if the participant obtains the agreement of the *Market Participant* who is the other party to the reallocation.

Part I Technical Standards for Wind Generation (2007 amendments)

11.10 Rules consequent on making of the National Electricity Amendment (Technical Standards for Wind Generation and other Generator Connections) Rule 2007

11.10.1 Definitions

Subject to this rule 11.10, in this rule 11.10:

Amending Rule means the National Electricity Amendment (Technical Standards for Wind Generation and other Generator Connections) Rule 2007.

commencement date means the date on which the Amending Rule commences operation.

new Chapter 5 means Chapter 5 of the *Rules* in force immediately after the commencement date.

old Chapter 5 means Chapter 5 of the *Rules* in force immediately prior to the commencement date.

11.10.2 Provision of information under S5.2.4 in registration application

(a) Any requirements in the Amending Rule that require a person who is applying to be a *Registered Participant* to submit information in relation to clause S5.2.4 for the purposes of clause 2.9.2 does not apply to any person who has, in accordance with clause 2.9.1:

(1) submitted an application to be registered as a *Registered Participant*;

(2) commenced a process for submitting further information in relation to the application referred to in subparagraph (1); or

(3) has submitted further information in relation to the application referred to in subparagraph (1),

and, at the commencement date, has not been registered by *NEMMCO* in accordance with clause 2.9.2 as a *Registered Participant*.

(b) A person registered in accordance with this clause 11.10.2:

(1) subject to subparagraph (2), is taken to be registered in accordance with the requirements of the *Rules* as amended by the Amending Rule; and

(2) must submit all information required under clause S5.2.4 within six months of the commencement date.

11.10.3 Access standards made under the old Chapter 5

(a) Any *automatic access standard* or *negotiated access standard* that applied to a *generating unit or generating system* under the old Chapter 5 continues to apply to that system or unit as if the Amending Rule had not been made.

(b) Unless a *Generator* and a *Network Service Provider* otherwise agree, a *negotiated access standard* that is the subject of a negotiating process as at the commencement date, is to be negotiated in accordance with the old Chapter 5, as if the Amending Rule had not been made.

11.10.4 Modifications to plant by Generators

Unless the *Generator* and the relevant *Network Service Provider* otherwise agree, a *Generator* who at the commencement date has proposed to modify a *plant* and has commenced negotiations with a *Network Service Provider* under the old Chapter 5 is to continue the negotiating process in accordance with the old Chapter 5 as if the Amending Rule had not been made.

11.10.5 Technical Details to Support Application for Connection and Connection Agreement

(a) Subject to paragraphs (b) and (c), any decision or action taken by *NEMMCO* for the purpose of developing and *publishing* an initial *Generating System Design Data Sheet*, an initial *Generating System Setting Data Sheet* and initial *Generating System Model Guidelines* under clause S5.5.7 prior to the commencement date has continuing effect as if the decision had been made or the action had been taken under the Amending Rule.

(b) Pending the final *publication* of the *Generating System Design Data Sheet* and the *Generating System Setting Data Sheet* under clause S5.5.7:

(1) schedule 5.5.1 of the *Rules* as in force immediately before the commencement date is taken to be the interim *Generating System Design Data Sheet*; and

(2) schedule 5.5.2 of the *Rules* as in force immediately before the commencement date is taken to be the interim *Generating System Setting Data Sheet*.

(c) The interim *Generating System Design Data Sheet* and interim *Generating System Setting Data Sheet* referred to in paragraph (b) continue in force until *NEMMCO publishes* the equivalent data sheet under S5.5.7 which must be no later than 29 February 2008.

11.10.6 Transitional arrangements for establishment of performance standards

For the purposes of the definition of performance requirement in clause 4.16.1, clauses S5.2.8 and S5.2.9 of the old Chapter 5 applies as if the Amending Rule had not been made.

11.10.7 Jurisdictional Derogations for Queensland

(a) For the purposes of clause 9.37.12, clause S5.2.5.2(c) of the old Chapter 5 applies as if the Amending Rule had not been made.

(b) For the purposes of clause 9.37.21, clause S5.2.5.13 of the old Chapter 5 applies as if the Amending Rule had not been made.

11.10A Rules consequent on the making of the National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2008

11.10A.1 Definitions

In this rule 11.10A:

Amending Rule means the National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2008.

classified generating unit means a *non-scheduled generating unit* or *scheduled generating unit* immediately before the registration date that could be classified as a *semi-scheduled generating unit* immediately after the registration date.

commencement date means the date on which Schedule 2 of the Amending Rule commences operation.

committed project means a project that *NEMMCO* considers has been fully committed by the project proponent taking into account the following factors:

(a) the project proponent's rights to land for the construction of the project;

(b) whether contracts for the supply and construction of the project's major plant or equipment, including contract provisions for project cancellation payments, have been executed;

(c) the status of all planning and construction approvals and licences necessary for the commencement of construction of the project, including completed and approved environmental impact statements;

(d) the level of commitment to financing arrangements for the project; and

(e) whether project construction has commenced or a firm date has been set for it to commence.

initial ECM guidelines has the meaning given in clause 11.10A.8.

potential semi-scheduled generating unit means a *generating unit* that, at the time of registration of that unit under Chapter 2, could have been classified as a *semi-scheduled generating unit* in accordance with clause 2.2.7 and:

(a) is listed in "Table 4.22: Committed NEM Wind Farms" of the 2007 *statement of opportunities*; or

(b) is considered by *NEMMCO* to be a committed project as at 1 January 2008,

and, for the avoidance of doubt, does not include a classified generating unit.

registered generating unit means a *generating unit* which has had its classification as a *semi-scheduled generating unit* approved by *NEMMCO* on or after the registration date and before the commencement date.

registration date means the date on which Schedule 1 of the Amending Rule commences operation.

11.10A.2 Registration and reclassification of classified generating units

(a) On and after the registration date, a *Non-Scheduled Generator* or *Scheduled Generator* with a classified generating unit will not be required to register as a *Semi-Scheduled Generator* and reclassify the classified generating unit as a *semi-scheduled generating unit*.

(b) For a period of 2 years after the commencement date, a *Generator* who:

(1) as at the commencement date has classified generating units; and

(2) subsequently reclassifies those generating units as *semi-scheduled generating units*,

is not required to pay *Participant fees* in accordance with rule 2.11.

(c) Classified generating units that are reclassified as *semi-scheduled generating units* after the registration date but prior to the commencement date are taken to be *non-scheduled generating units* or *scheduled generating units* (as the case may be) until the commencement date.

11.10A.3 Registered generating unit

(a) Subject to paragraph (b) and clause 11.10A.4, until the commencement date, a registered generating unit is taken to be a *non-scheduled generating unit* for the purposes of the *Rules*.

(b) A registered generating unit must meet the technical requirements for a *semi-scheduled generating unit* in schedule 5.2.

(c) A registered generating unit that:

(1) prior to the registration date is classified as a *scheduled generating unit*; and

(2) on or after the registration date but prior to the commencement date is reclassified as a *semi-scheduled generating unit*,

is taken to continue to be a *scheduled generating unit* until the commencement date.

11.10A.4 Classification of potential semi-scheduled generating unit

(a) On and after the registration date, a person may apply to *NEMMCO* to classify a potential semi-scheduled generating unit as:

(1) a *scheduled generating unit* in accordance with clause 2.2.2; or

(2) a *non-scheduled generating unit* in accordance with clause 2.2.3.

(b) *NEMMCO* must treat an application received under paragraph (a) as:

(1) in the case of an application referred to paragraph (a)(1), as an application to be classified as a *scheduled generating unit*; or

(2) in the case of an application referred to in paragraph (a)(2), as an application to be classified as a *non-scheduled generating unit*.

(c) In assessing an application referred to in paragraph (a)(2), *NEMMCO* must approve the classification if *NEMMCO* is satisfied that the output of the *generating unit* is *intermittent* even where the *generating unit* does not meet the requirements of clause 2.2.3(b)(1) or (2).

(d) If an application for classification of a potential semi-scheduled generating unit made under this clause 11.10A.4 is approved by *NEMMCO* in accordance with clause 2.2.2 or, subject to paragraph (c), clause 2.2.3, the relevant unit is taken to be a *scheduled generating unit* or *non-scheduled generating unit* (as the case may be) for the purposes of the *Rules*.

11.10A.5 Participant fees

Until *NEMMCO* determines a structure of *Participant fees* under rule 2.11 which provides for *Semi-Scheduled Generators*, references to *Scheduled Generators* in *NEMMCO's* "Structure of Participant Fees under rule 2.11 of the National Electricity Rules" publication dated 24 March 2006, will be taken to include *Semi-Scheduled Generators*.

11.10A.6 Timetable

(a) *NEMMCO* must amend the *timetable* in accordance with clause 3.4.3(b) to take into account the Amending Rule with those amendments to take effect from the commencement date.

(b) All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date to amend the *timetable* as required under paragraph (a) are taken to satisfy the equivalent action required under clause 3.4.3(b).

11.10A.7 Procedure for contribution factors for ancillary service transactions

(a) *NEMMCO* must amend the procedure prepared by *NEMMCO* under clause 3.15.6A(k) in accordance with clause 3.15.6A(m) to take into account the Amending Rule with those amendments to take effect from the commencement date.

(b) All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date to amend the procedure prepared by *NEMMCO* under clause 3.15.6A(k) as required under paragraph (a) are taken to satisfy the equivalent action under clause 3.15.6A(m).

11.10A.8 Guidelines for energy conversion model information

(a) Subject to paragraph (b), for the purposes of clause 2.2.7(d) *NEMMCO* must *publish* guidelines by no later than the registration date setting out the information to be contained in *energy conversion models* (the **initial ECM guidelines**).

(b) The initial ECM guidelines do not need to be prepared in consultation with *Semi-Scheduled Generators*. *NEMMCO* must replace the initial ECM guidelines as soon as reasonably practicable with guidelines described in clause 2.2.7(d) which have been prepared in consultation with *Semi-Scheduled Generators* and such other person that *NEMMCO*, acting reasonably, considers appropriate.

Part L Abolition of Snowy Region (2007 amendments)

11.13 Rules consequent on making the National Electricity Amendment (Abolition of Snowy Region) Rule 2007

11.13.1 Definitions

In this rule 11.13:

***Amending Rule* 2007** means the National Electricity Amendment (Abolition of Snowy Region) Rule 2007.

current *Regions Publication* means the document published by *NEMMCO* entitled "List of Regional Boundaries and Marginal Loss Factors for the 2007/08 Financial Year".

Draft Determination date means 25 January 2007.

implementation period means the period specified in clause 11.13.4.

implementation plan means the plan referred to in clause 11.13.5.

implementation function means a function referred to in clause 11.13.6.

Loss Factors Publication means the document *published* by *NEMMCO* from time to time under clauses 3.6.1(f) and 3.6.2(f1) which sets out *marginal loss factors*.

modified *regions* means the *regions* identified as the New South Wales *region* and the Victoria *region* in the current *Regions Publication*, modified as a result of the abolition of the Snowy *region* under the *Amending Rule* 2007 taking effect.

new *regions* means the unmodified *regions* and the modified *regions*.

New South Wales *region*, **Snowy *region*** and **Victoria *region*** each have the same meaning as in clause 3.5.6.

old *regions* means the *regions* identified in the current *Regions Publication*.

Rule commencement date means the date on which the *Amending Rule* 2007 commences operation.

unmodified regions means the *regions* known as the Queensland *region*, the South Australia *region* and the Tasmania *region* as identified in the current *Regions Publication*, the boundaries of which are not affected by the abolition of the Snowy *region* under the *Amending Rule* 2007.

11.13.2 Purpose of rule 11.13

The purpose of this rule 11.13 is to enable the efficient and effective implementation of a change of *region* boundaries as a result of the abolition of the Snowy *region* during the implementation period, prior to the start of the new *regions*, and to support a smooth transition from the old *regions* to the new *regions*.

11.13.3 Application of rule 11.13

This rule 11.13 applies despite any other provision of the *Rules* (including any guideline or procedure made under the *Rules*), and to the extent of any inconsistency, this rule 11.13 prevails during the implementation period.

11.13.4 Implementation period

(a) The implementation period starts on the Rule commencement date and ends on 15 July 2008.

(b) Any decision made or action taken by *NEMMCO* for the purpose of implementing the abolition of the Snowy *region* between the Draft Determination date and the Rule commencement date, has continuing effect as if the decision had been made or the action had been taken under the *Rules* as amended by the *Amending Rule* 2007.

11.13.5 Publishing of implementation plan by NEMMCO

(a) *NEMMCO* must develop and *publish* by 15 September 2007 an implementation plan that identifies the key implementation steps to be taken during the implementation period, including the proposed exercise by *NEMMCO* of the implementation functions.

(b) *NEMMCO* may, during the implementation period, amend the implementation plan as necessary, and must *publish* the amended plan.

11.13.6 NEMMCO implementation functions

(a) Subject to this rule 11.13, *NEMMCO* has, during the implementation period, the following functions and powers ('the implementation functions'):

(1) the power to make a decision or take any action (including the power to refrain from making a decision or taking action) that is necessary or consequential to the implementation of the *Amending Rule* 2007; and

(2) the other functions and powers specified under this rule 11.13.

(b) The exercise of the implementation functions by *NEMMCO* must be referable to and consistent with the implementation plan as *published*.

11.13.7 Software modifications to implement abolition of Snowy region

Despite clause 3.17.1 and subject to this clause 11.13.7, *NEMMCO*:

(1) may, as an implementation function, alter, reconfigure, reprogram or otherwise modify or enhance any computer software required for the operation of the *market*; and

(2) must, to the extent practicable, adhere to the procedures for change management under the document entitled "NEM Systems IT Procedure Manual: Change Management" and *NEMMCO* may make the changes under paragraph (1) without authorisation by the *AER* even if *NEMMCO* does not fully adhere to that document.

11.13.8 Allocation of transmission connection points as a result of abolition of Snowy region

Each *transmission network connection point* previously assigned to the Snowy *region* as at the Rule commencement date is allocated to the New South Wales *region* and the Victoria *region* as follows:

Loads

Location	Voltage kV	TNI code	Region
Khancoban	330	NKHN	Victoria

Generation

Location	Voltage kV	Connection point ID	TNI code	Region
Jindabyne pump at Guthega	132	NGJP	NGJP	Victoria
Guthega	132	NGUT	NGUT	NSW
Guthega Ancillary Services 2	132	NGUT2	NGUT	NSW
Guthega	132	NGUT8	NGUT	NSW
Lower Tumut	330	NLTS	NLTS	NSW
Lower Tumut Ancillary Services 2 (pumps)	330	NLTS3	NLTS	NSW
Lower Tumut Ancillary Services 3	330	NLTS5	NLTS	NSW
Lower Tumut	330	NLTS8	NLTS	NSW
Murray Ancillary Services 1	330	NMUR11	NMUR	Victoria
Murray Ancillary Services 2	330	NMUR13	NMUR	Victoria
Murray Ancillary Services 3	330	NMUR5	NMUR	Victoria
Murray Ancillary Services 4	330	NMUR7	NMUR	Victoria
Murray	330	NMUR8	NMUR	Victoria

Location	Voltage kV	Connection point ID	TNI code	Region
Murray Ancillary Services 5	330	NMUR9	NMUR	Victoria
Upper Tumut	330	NUTS	NUTS	NSW
Upper Tumut Ancillary Services 2	330	NUTS3	NUTS	NSW
Upper Tumut Ancillary Services 3	330	NUTS5	NUTS	NSW
Upper Tumut Ancillary Services 4	330	NUTS7	NUTS	NSW
Upper Tumut	330	NUTS8	NUTS	NSW

11.13.9 Location of region boundaries

The location of the *region* boundary between the New South Wales region and the Victoria *region* as a result of the abolition of the Snowy *region* is as follows:

(1) at Red Cliffs Terminal Station on the 0X1 Red Cliffs to Buronga 220 Transmission Line;

(2) at Wodonga Terminal Station on the 060 Wodonga to Jindera 330 Transmission Line;

(3) at Murray Switching Station on the 066 Murray to Lower Tumut 330 Transmission Line;

(4) at Murray Switching Station on the 065 Murray to Upper Tumut 330 Transmission Line;

(5) at the Guthega 132kV Switchyard 132kV Bus No 2-3 bus Section Disconnector 4128.

11.13.10 2008/09 Regions Publication and Loss Factors Publication

(a) *NEMMCO* must, as an implementation function, review and *publish* by 1 April 2008:

(1) the 2008/09 *Regions Publication*; and

(2) the 2008/09 Loss Factors Publication,

making any changes necessary in accordance with the *Amending Rule* 2007, including but not limited to the allocation of *transmission network*

connection points under clause 11.13.8 and the location of *region* boundaries under clause 11.13.9.

(b) In relation to the publications referred to in paragraph (a) (or subsequent annual *Regions Publications* or Loss Factors Publications), nothing prevents *NEMMCO*:

(1) amending those publications to implement:

(i) the *Amending Rule* 2007 or future *region* boundary changes under the *Rules*;

(ii) future physical changes to the *transmission network*;or

(iii) changes in the configuration of *connection points* requested by *Registered Participants* for the purposes of participation in the *NEM*; or

(2) publishing the annual *Regions Publication* and the Loss Factors Publication in a single document.

11.13.11 Reserve margin calculations

NEMMCO may, as an implementation function, determine estimates of the minimum reserve levels to be applied to the modified *regions* provided that the process used to determine the estimates is *published*.

11.13.12 Re-calculation of network constraints and transmission loss factors

(a) A *Transmission Network Service Provider* must, to the extent practicable, provide to *NEMMCO* on request information for or with respect to the re-calculation of *network constraints* and *transmission loss factors* including but not limited to:

(1) advice on the re-calculation of *network* limits, including stability limits; and

(2) information relating to the determination of *network losses* and *loss factors*.

(b) Where a *Transmission Network Service Provider* advises *NEMMCO* that it is not practicable to provide information relating to the re-calculation of *network* limits or losses within the time period specified in the request, *NEMMCO* may:

(1) request the *Transmission Network Service Provider* to provide the information to *NEMMCO* as it becomes available to the provider;

(2) determine *inter-regional loss factors* on the basis of estimates;

(3) apportion losses for the purpose of *settlements residue payments* using estimates; or

(4) re-formulate existing *network constraints* to apply to the new *regions* using estimates.

(c) *NEMMCO* must *publish* the process used for determining estimates under paragraph (b).

11.13.13 Transition of settlements residue auction arrangements

(a) Terms used in this clause 11.13.13 that are used in the *auction rules* have the same meaning as in those rules.

(b) Despite anything in rule 3.18, *NEMMCO*:

(1) may, as an implementation function:

(i) amend the *auction rules*;

(ii) remove or modify Unit Categories affected by the abolition of the Snowy *region* and the consequential modification of the New South Wales *region* and the Victoria *region*;

(iii) re-set *auction expense fees* as required to align with any new Unit Categories;

(iv) conduct *auctions* in relation to new Unit Categories; and

(v) take any other action in relation to *auctions* that is necessary or consequential on the abolition of the Snowy *region*; and

(2) must consult with the *Settlements Residue Committee* in amending the *auction rules* under paragraph (1) and is only required to comply with the *Rules consultation procedures* to the extent practicable in the circumstances of the implementation of the abolition of the Snowy *region*.

11.13.14 Continuity of regions

Subject to this rule 11.13 and clause 3.5.6, on and from 00:00 hours *EST* on 1 July 2008:

(1) the unmodified *regions* continue and are taken to be *regions* for all purposes under the *Rules*; and

(2) the New South Wales *region* and the Victoria *region* as modified by the *Amending Rule* 2007 continue and are taken to be *regions* specified under clause 3.5.1 for all purposes under the *Rules.*

Part M Economic Regulation of Distribution Services (2007 amendments)

Division 1 General Provisions

11.14.1 Application of this Division

This Division has no application in relation to Victoria.

11.14.2 Definitions

amending rules means the *National Electricity (Economic Regulation of Distribution Services) Amendment Rules 2007*.

current Chapter 6 means Chapter 6 of these *Rules* as currently in force.

former Chapter 6 means Chapter 6 of these *Rules* as in force before the substitution of the *current Chapter 6* by the amending rules.

jurisdictional pricing determination for a *participating jurisdiction* means a determination regulating *distribution service* pricing made by the *Jurisdictional Regulator* for the *participating jurisdiction* and in force immediately before the date of the relevant amendment.

new regulatory provisions means the provisions of *current Chapter 6* or (if applicable) of later Divisions of this Part providing for the economic regulation of *distribution services* after the transitional regulatory period comes to an end.

old regulatory regime for a *participating jurisdiction* includes:

(a) the jurisdictional pricing determination for the *participating jurisdiction*; and

(b) the laws (including the *former Chapter 6*) governing the making, monitoring, administration and enforcement of the jurisdictional pricing determination;

(c) any other determination, guideline, code or document (whatever its description) of a kind contemplated by the *former Chapter 6* that was made for the *participating jurisdiction* by the relevant *Jurisdictional Regulator* and was in force immediately before the date of the relevant amendment;

(d) any other obligation imposed by or under the *former* Chapter 6;

(e) any power or function of the *Jurisdictional Regulator* under the former Chapter 6.

new regulatory regime means the system for the economic regulation of *distribution services* contemplated by the new regulatory provisions.

relevant amendment means the substitution of the current Chapter 6 for the former Chapter 6 by the amending rules.

transitional regulatory period for a *participating jurisdiction* means the *regulatory control period* for which the *jurisdictional pricing determination* for the relevant *participating jurisdiction* was made.

11.14.3 Preservation of old regulatory regime

(a) Subject to this Part, a *Distribution Network Service Provider* who was providing *distribution services* in a *participating jurisdiction* at the date of the relevant amendment

(1) remains subject to the old regulatory regime for the duration of the transitional regulatory period; and

(2) does not become subject to the new regulatory regime until the end of the transitional regulatory period.

Examples:

1. Reporting, monitoring and other compliance requirements continue under the old regulatory regime until the end of the transitional regulatory period and (subject to this Part) are unaffected by the new regulatory provisions.

2. Price regulation continues under the old regulatory regime until the end of the transitional regulatory period and is unaffected by the new regulatory provisions.

3. Prudential, billing and settlement issues are governed by rules 6.7 and 6.8 of former Chapter 6 and any applicable regulatory instruments (rather than Parts J and K of current Chapter 6).

4. Access disputes are dealt with under the old regulatory regime (and cannot be notified under Part L of current Chapter 6).

(b) However:

(1) the new regulatory provisions govern the making of a distribution determination for the *Distribution Network Service Provider* at the end of the transitional regulatory period; and

(2) in that respect the *new regulatory provisions* apply to a *Distribution Network Service Provider* who is still subject to the old regulatory regime as if the jurisdictional pricing determination were a distribution determination approaching the end of its *regulatory control period*.

11.14.4 Transfer of regulatory responsibility

(a) The Minister for a *participating jurisdiction* may, during the course of the transitional regulatory period, transfer responsibility for the economic regulation of *distribution services* in the relevant jurisdiction from the *Jurisdictional Regulator* to the *AER*.

(b) A Minister for a *participating jurisdiction* makes (or is taken to make) a transfer of regulatory responsibility under this clause:

(1) by giving notice of the transfer to the *Jurisdictional Regulator* and the *AER*; or

(2) if powers exist apart from this clause under the law of the *participating jurisdiction* to transfer regulatory responsibility from the *Jurisdictional Regulator* to the *AER* – by exercising those powers.

(c) If the Minister makes a transfer of regulatory responsibility under this clause:

(1) the *AER* is subrogated to the position of the *Jurisdictional Regulator*; and

(2) the *AER* may therefore exercise powers and functions of the *Jurisdictional Regulator* (including legislative powers and functions) under the old regulatory regime; and

Note:

The AER may also use its powers (e.g. for information gathering) under the Law.

(3) references to the *Jurisdictional Regulator* in a determination or other instrument (including a legislative instrument) related to the old regulatory regime will be read as references to the *AER*.

11.14.5 Special requirements with regard to ring fencing

(a) The requirements of the old regulatory regime with regard to ring fencing (rule 6.12 of *former Chapter 6* and related guidelines) apply to a *Distribution Network Service Provider* until the *AER* assumes regulatory responsibility at the end of the transitional regulatory period or on the earlier transfer of regulatory responsibility to the *AER.*

(b) On the *AER*'s assumption of regulatory responsibility, a *Distribution Network Service Provider*:

(1) ceases to be subject to the requirements of the old regulatory regime with regard to ring fencing; and

(2) becomes subject to the ring fencing requirements of the new regulatory regime; but

(3) guidelines in force for a *participating jurisdiction* immediately before the *AER's* assumption of regulatory responsibility (**transitional guidelines)** continue in force for that jurisdiction subject to amendment, revocation or replacement by guidelines made under the new regulatory regime.

(c) The transitional guidelines:

(1) are taken to be guidelines made by the *AER* under the new regulatory regime; and

(2) are to be construed as if references to a *Jurisdictional Regulator* were references to the *AER*.

(d) A waiver granted, or additional ring fencing requirement imposed, by a *Jurisdictional Regulator* under the transitional guidelines continues in force under the transitional guidelines subject to variation or revocation by the *AER*.

11.14.6 Additional requirements with regard to cost allocation

(a) Even though a *Distribution Network Service Provider* remains subject to the old regulatory regime, the provider is also subject, as from the date of the relevant amendment, to the requirements of Part F of the current Chapter 6 (Cost Allocation).

(b) This clause applies only for the purposes of the next distribution determination for the *Distribution Network Service Provider*.

11.14.7 Construction of documents

To facilitate the transition from the old regulatory regime to the new regulatory regime, references in determinations and other documents to provisions of former Chapter 6 are to be read (where the context admits) to corresponding provisions of the current Chapter 6.

Division 2 Special provisions applying to New South Wales and the Australian Capital Territory for the Regulatory Control Period 2009-2014

11.15 Special provisions applying to New South Wales and the Australian Capital Territory

11.15.1 Regulatory control period 2009-2014 for NSW and ACT

There is to be a regulatory control period of 5 years for the NSW and ACT Distribution Network Service Providers commencing on 1 July 2009, which is referred to in this Division 2 as the regulatory control period 2009-2014.

11.15.2 Application of Chapter 6 to NSW and ACT for regulatory control period 2009-2014

(a) Chapter 6 of the *Rules* applies in relation to the NSW and ACT Distribution Network Service Providers in respect of the regulatory control period 2009-2014 as if that Chapter were amended so as to be in the form set out in Appendix 1 to the *Rules*.

(b) However, anything required to be done by or in relation to the NSW and ACT Distribution Network Service Providers during the regulatory control period 2009-2014 for the purposes of the *regulatory control period* commencing on 1 July 2014 is to be done in accordance with general Chapter 6, but (where appropriate) taking into account anything done under transitional Chapter 6.

(c) Accordingly general Chapter 6 does not apply in relation to the NSW and ACT Distribution Network Service Providers in respect of the regulatory control period 2009-2014 except:

(1) as provided by paragraphs (a) and (b); and

(2) to the extent that a provision of transitional Chapter 6 expressly applies a provision of general Chapter 6 or expressly provides that an act, matter or thing has to be done in accordance with a provision of or a procedure in general Chapter 6.

(d) For the avoidance of doubt, this rule 11.15 and transitional Chapter 6 do not apply to *Distribution Network Service Providers* not referred to in paragraph (c).

(e) References in the *Rules* (other than Chapter 6 and this rule 11.15) to Chapter 6 or a provision of Chapter 6 are references to transitional Chapter 6 or a provision of transitional Chapter 6 so far as the references relate to the regulatory control period 2009-2014 for the NSW and ACT Distribution Network Service Providers.

(f) In this rule 11.15:

"general Chapter 6" means Chapter 6 as in force apart from this rule 11.15.

"transitional Chapter 6" means Chapter 6 in the form set out in Appendix 1 to the Rules.

Division 3 Transitional arrangements for first distribution determination for Queensland Distribution Network Service Providers

11.16 Transitional arrangements for first distribution determination for Queensland Distribution Network Service Providers

11.16.1 Definitions

In this Division 3:

2005 determination means the Final Determination: Regulation of Electricity Distribution of the Queensland Competition Authority dated April 2005.

EDSD Review means the review by the Independent Panel appointed by the Queensland Government into Electricity Distribution and Service Delivery for the 21st Century which was established in March 2004 and reported in July 2004.

ENERGEX means Energex Limited A.C.N 078 849 055 and any successor business.

Ergon Energy means Ergon Energy Corporation Limited A.C.N. 087 646 062 and any successor business.

Queensland Competition Authority means the authority established by section 7 of the *Queensland Competition Authority Act 1997* (Qld).

regulatory control period means the *regulatory control period* beginning 1 July 2010.

11.16.2 Application of Part to Queensland 2010 distribution determinations

The requirements of this Division 3 apply for the purposes of making a distribution determination for ENERGEX and Ergon Energy for the regulatory control period and modify the application of Chapter 6 of the Rules to the extent set out in this Division 3.

11.16.3 Treatment of the regulatory asset base

(a) Nothing in Chapter 6 of the *Rules* requires ENERGEX or Ergon Energy to amend the approach allowed in the 2005 determination in relation to the treatment of *standard control services* and other services in the regulatory asset base for the regulatory control period.

(b) The *AER* must accept the approach proposed by ENERGEX and Ergon Energy for the regulatory control period if it is consistent with the approach in the 2005 determination.

(c) The *AER* must provide for any necessary adjustments or mechanisms in the *distribution determination* for the regulatory control period to prevent any cross-subsidies between *standard control services* and other *distribution services*.

Note:

The regulatory asset bases for Ergon Energy and ENERGEX are likely to include assets used to provide services which are not standard control services and accordingly the expected revenue for each year will need to be adjusted to avoid double recovery of those costs.

11.16.4 Efficiency Benefit Sharing Scheme

(a) An *efficiency benefit sharing scheme* for ENERGEX and Ergon Energy for the regulatory control period must not cover efficiency gains and losses relating to capital expenditure.

(b) For the purposes of clause 6.5.8(c) the *AER* must also have regard to the continuing obligations on ENERGEX and Ergon Energy throughout the regulatory control period to implement the recommendations from the EDSD Review adopted by the Queensland Government.

11.16.5 Service Target Performance Incentive Scheme

In formulating a *service target performance incentive scheme* to apply to ENERGEX and Ergon Energy for the regulatory control period, the *AER*, in addition to the requirements in clause 6.6.2(b), must also:

(1) take into account the continuing obligations on ENERGEX and Ergon Energy throughout the regulatory control period to implement the recommendations from the EDSD Review adopted by the Queensland Government;

(2) take into account the impact of severe weather events on service performance; and

(3) consider whether the scheme should be applied by way of a paper trial or whether a lower powered incentive is appropriate.

11.16.6 Framework and approach

(a) If either ENERGEX or Ergon Energy submits a proposal to the *AER* as to the classification of services and control mechanism for the regulatory control period on or before 31 March 2008, the *AER* must publish its *framework and approach paper* under clause 6.8.1 in relation to those issues within five months of receiving the proposal from ENERGEX or Ergon Energy (as the case may be).

(b) This clause does not affect the timing or the processes of the *AER* in preparing and publishing its *framework and approach paper* on the remaining issues in clause 6.8.1 for ENERGEX or Ergon Energy if they submit a proposal under paragraph (a).

11.16.7 Regulatory Proposal

(a) For the purposes of submitting a *regulatory proposal* under clause 6.8.2 for the regulatory control period, ENERGEX and Ergon Energy may, for the purposes of calculating indicative prices referred to in clause 6.8.2(c)(4) and including X factors for the purposes of clause 6.5.9, treat the proposed *statement of regulatory intent* published under clause 6.16(b)(1) as if it were the applicable *statement of regulatory intent.*

(b) If the *statement of regulatory intent* differs materially from the proposed *statement of regulatory intent,* ENERGEX or Ergon Energy may revise its calculation of indicative prices and proposed X factors in its *regulatory proposal* on or before 1 July 2009.

(c) The *AER* must *publish* any revised information submitted by ENERGEX or Ergon Energy under this clause.

11.16.8 Side constraints

For the regulatory control period, nothing in clause 6.18.6 should preclude the implementation of any price paths approved by the Queensland Competition Authority (including any necessary adjustment of those price paths in light of the expected revenue for the first *regulatory year* of the regulatory control period).

11.16.9 Cost pass throughs

(a) If an event or circumstance occurs before 1 July 2010 which would constitute a pass through under the 2005 determination and no application for a pass through has been made in relation to that event or circumstance, ENERGEX or Ergon Energy may apply to the *AER* within a year of the event or circumstance occurring to accommodate the impact of the event in the regulatory control period.

(b) The *AER* must allow a pass through of such amounts if the event or circumstance would have constituted a pass through under the 2005 determination as if the amounts were *approved pass through amounts* under clause 6.6.1.

11.16.10 Capital Contributions Policy

(a) ENERGEX and Ergon Energy must comply with a capital contributions policy published under this clause 11.16.10 for the regulatory control period.

(b) By 1 July 2009, ENERGEX and Ergon Energy must publish on their website a capital contributions policy based upon the requirements relating to capital contributions in their Network Pricing Principles Statements approved by the Queensland Competition Authority immediately in force prior to 1 July 2009.

(c) The *AER* may by written notice, before 1 January 2010, direct ENERGEX or Ergon Energy to revise and republish their capital contributions policy within 15 *business days* of the notice only if the published policy does not give effect to the requirements relating to capital contributions in their Network Pricing Principles Statement.

(d) After 1 January 2010, ENERGEX or Ergon Energy may apply to the *AER* to amend their published capital contributions policy and the *AER* may, after such consultation as it considers appropriate, approve or not approve that amendment.

Division 4 – Transitional provisions of specific application to Victoria

11.17.1 Definitions

In this Division:

AMI Order in Council means the Order in Council made by the Governor of Victoria under section 15A and section 46D of the *Electricity Industry Act 2000* (Vic) and published in the Victoria Government Gazette on 28 August 2007 (and includes that Order in Council as amended from time to time).

ESC cost allocation guidelines means *Electricity Industry Guideline No.3, Regulatory Information Requirements* made by the ESC and dated 14 December 2006 (and includes those guidelines as amended from time to time).

ESC distribution pricing determination means the Victorian distribution pricing determination as defined in section 3(1) of the *National Electricity (Victoria) Act 2005*.

Victorian Distribution Network Service Provider means a *Distribution Network Service Provider* for a *distribution network* situated wholly or partly in Victoria.

11.17.2 Calculation of estimated cost of corporate income tax

(a) This clause applies to the calculation of the estimated cost of corporate income tax for the purposes of distribution determinations that are to take effect on 1 January 2011 for Victorian Distribution Network Service Providers.

(b) For calculating the estimated cost of corporate income tax, the *AER* must adopt:

(1) the taxation values of assets carried over from the ESC distribution pricing determination; and

(2) the classification of assets, and the method of classification, adopted for the ESC distribution pricing determination; and

(3) the same method of depreciation as was adopted by the ESC for the ESC distribution pricing determination.

(c) The *AER* may, however, depart from methods of asset classification or depreciation mentioned in paragraph (b)(2) or (3) to the extent required by changes in the taxation laws or rulings given by the Australian Taxation office.

(d) A *post-tax revenue model* must be consistent with this clause.

11.17.3 Decisions made in the absence of a statement of regulatory intent

(a) This clause applies if a Victorian Distribution Network Service Provider submits a *building block proposal* before the *AER* issues a *statement of regulatory intent*.

(b) In deciding questions to which the considerations stated in clause 6.5.4(e) are relevant, the *AER* must have regard to those considerations.

11.17.4 Cost allocation guidelines

(a) In formulating the *Cost Allocation Guidelines* under clause 6.15.3, the *AER* must include guidelines specifically applicable to Victorian Distribution Network Service Providers (the ***guidelines of specific application to Victoria***).

(b) The guidelines of specific application to Victoria:

(1) must be formulated with regard to the ESC cost allocation guidelines; and

(2) must be designed to ensure, to the maximum practicable extent, consistency between cost allocation as required by the ESC distribution pricing determination and cost allocation in later *regulatory control periods*.

11.17.5 Modification of requirements related to cost allocation method

(a) Clause 6.15.4(a) applies to a Victorian Distribution Network Service Provider as if, instead of requiring submission of the provider's proposed *Cost Allocation Method* within 12 months after the commencement of Chapter 6, it required submission of the proposed *Cost Allocation Method* together with the first *building block proposal* to be submitted by the provider after the commencement of Chapter 6.

(b) The references in clauses 6.5.6(b)(2) and 6.5.7(b)(2) to the *Cost Allocation Method* are, if paragraph (a) is applicable, to be read as references to the proposed *Cost Allocation Method* submitted with the *building block proposal*.

(c) The *AER* must include in its *framework and approach paper* prepared for a Victorian *Distribution Network Service Provider*, in relation to the first *building block proposal* to be submitted by the provider after the commencement of Chapter 6, a statement of its likely approach to cost allocation based on the guidelines then in force.

(d) The *AER*:

(1) must, in deciding under clause 6.15.4(c) whether to approve a *Cost Allocation Method* submitted by a Victorian Distribution Network Service Provider, have regard to previous cost allocation in accordance with the ESC distribution pricing determination; and

(2) must not approve the *Cost Allocation Method* unless it allows effective comparison of historical and forecast cost allocation between the period to which the ESC distribution pricing determination applies and later *regulatory control periods*; and

(3) may, subject to the relevant *Cost Allocation Guidelines*, refuse to approve the *Cost Allocation Method* if it differs from the method previously used by the Victorian Distribution Network Service Provider.

11.17.6 AMI Order in Council

(a) Metering services that are regulated under the AMI Order in Council are not, while so regulated, subject to regulation under a distribution determination but, on cessation of regulation under the AMI Order in Council, are liable to regulation under a distribution determination.

(b) However, for a relevant *regulatory control period*, services to which exit fees under clause 7, or restoration fees under clause 8, of the AMI Order in Council applied are to be classified as alternative control services and are to be regulated by the *AER* on the same basis as applied under the AMI Order in Council.

(c) For paragraph (b), a relevant *regulatory control period* is a *regulatory control period* commencing on or after 1 January 2016 and before 1 January 2021.

(d) Until there is a transfer of regulatory responsibility from the *ESC* to the *AER* under a law of Victoria, clause 7.3.6(f) in its application to Victoria will be read as if it permitted the recovery of the costs to which it refers in accordance with a determination made either by the *AER* or by the *ESC*.

(e) This clause expires on 1 January 2021.

Part N Registration of Foreign Based Persons and Corporations as Trader Class Participants (2007 amendments)

11.18 Rules consequential on the making of the National Electricity Amendment (Registration of Foreign Based Persons and Corporations as Trader Class Participants) Rule 2007

11.18.1 Definitions

For the purposes of this rule 11.18:

Amending Rule means the National Electricity Amendment (Registration of Foreign Based Persons and Corporations as Trader Class Participants) Rule 2007.

commencement date means the day on which the Amending Rule commences operation.

11.18.2 Auction rules

(a) *NEMMCO* must amend the *auction rules* by 1 September 2008 in accordance with clause 3.18.3 to incorporate the amendments to the *Rules* made by the Amending Rule.

(b) Any action taken by *NEMMCO* prior to the commencement date, in anticipation of the commencement date, to amend the *auction rules* for the purpose of the Amending Rule is taken to satisfy the equivalent action under clause 3.18.3.

Part O Process for Region Change (2007 amendments)

11.19 Rules consequent on making of the National Electricity Amendment (Process for Region Change) Rule 2007

11.19.1 Definitions

Amending Rule means the National Electricity Amendment (Process for Region Change) Rule 2007.

commencement date means the day on which the Amending Rule commences operation.

old clause 3.5.5 means clause 3.5.5 of the *Rules* as in force immediately before the commencement date.

11.19.2 Regions Publication

The Regions Publication published by *NEMMCO* immediately before the commencement date in accordance with old clause 3.5.5 and clause 11.13.10 is taken to be the *Regions Publication published* by *NEMMCO* in accordance with clause 2A.1.3.

Part P Integration of NEM Metrology Requirements

11.20 Rules consequential on the making of the National Electricity Amendment (Integration of NEM Metrology Requirements) Rule 2008

11.20.1 Definitions

For the purposes of this rule 11.20:

Amending Rule means the National Electricity Amendment (Integration of NEM Metrology Requirements) Rule 2008.

commencement date means the day on which the Amending Rule commences operation.

first-tier jurisdictional requirements publication means the publication published by *NEMMCO* in accordance with clause 11.20.6.

Minimalist Transitioning Approach has the same meaning as in the Queensland Electricity Industry Code.

new clause 7.3.1 means clause 7.3.1 of the *Rules* immediately after the commencement date.

Victorian *first-tier load* means a load in Victoria where the electricity flowing through the *connection point* is equal to, or greater than, 160 MWh per annum.

11.20.2 Metering installations for non-market generating units immediately prior to 30 June 2008

(a) A *metering installation* for a *non-market generating unit* that was installed immediately prior to 30 June 2008 and complied with the applicable jurisdictional requirements for that installation on 30 June 2008 is taken to satisfy the requirements for *metering installations* for *non-market generating units* in new clause 7.3.1.

(b) Where a *metering installation* for a *non-market generating unit* did not comply with the requirements referred to in paragraph (a), that installation must be repaired or replaced in accordance with the requirements of new clause 7.3.1.

(c) The applicable jurisdictional requirements for *metering installations* for *non-market generating units* referred to in paragraph (a) must be referred to in the first-tier jurisdictional requirements publication.

11.20.3 First-tier load metering installations

(a) Subject to clause 11.20.5, a *first-tier load metering installation* as at 30 June 2008 that complied with the applicable jurisdictional requirements for that installation as at that date is taken to comply with the *Rules* provided the *metering installation* continues to comply with the applicable jurisdictional requirements as at 30 June 2008.

(b) A *first-tier load metering installation* that does not satisfy the requirements of paragraph (a) must be repaired or replaced in accordance with the *Rules*.

(c) The applicable jurisdictional requirements referred to in paragraph (a) for *first-tier load metering installations* must be referred to in the first-tier jurisdictional requirements publication.

11.20.4 First-tier load metering installations in Victoria

(a) Subject to paragraph (b) and despite the *Rules*, a *Market Participant* who is responsible for a Victorian *first-tier load* with a type 5 or type 6 *metering installation* immediately before the commencement date is taken to be the *responsible person* for that *metering installation*.

(b) A *Market Participant* who is taken to be the *responsible person* for the *metering installation* referred to in paragraph (a) must ensure the *metering installation* meets the applicable jurisdictional requirements for that installation as referred to in the first-tier jurisdictional requirements publication in accordance with clause 11.20.3(c).

11.20.5 Minimalist Transitioning Approach in Queensland

For the duration of the Minimalist Transitioning Approach, clauses 7.2.3(i)(2), 7.2.5(b)(2), 7.2.5(d)(6) and 7.3.1(f) of the *Rules* do not apply in respect of a *metering installation* which:

(a) is the responsibility of a *Market Participant* or *responsible person* who is operating under the Minimalist Transitioning Approach in Queensland; and

(b) in accordance with the *Market Settlement and Transfer Solution Procedures*:

(1) has a *NMI* classification of SMALL; and

(2) the *Local Network Service Provider* has not received a valid request from a *Market Customer* for the *NMI* to be registered with *NEMMCO*.

11.20.6 First-tier jurisdictional requirements publication

(a) *NEMMCO* must, in consultation with the *participating jurisdictions*, *publish* a document ('**first-tier jurisdictional requirements publication**') that lists the documents that contain the applicable jurisdictional requirements referred to in clauses 11.20.2, 11.20.3 and 11.20.4.

(b) *NEMMCO* must *publish* the first-tier jurisdictional requirements publication by 30 June 2008.

11.20.7 Metrology procedure

(a) *NEMMCO* must make the required amendments to the *metrology procedure* as a result of the Amending Rule by 31 July 2008.

(b) All actions taken by *NEMMCO* prior to the commencement date to amend the *metrology procedure* in accordance with paragraph (a) are deemed to be valid as at the commencement date to the extent that those actions were

taken in accordance with the relevant requirements of rule 7.14 (as though the Amending Rule was in force at the time that the action was taken).

(c) The *metrology procedure* published in accordance with rule 7.14 immediately before the commencement date continues to apply as if the Amending Rule had not been made and until *NEMMCO publishes* the amended the *metrology procedure* in accordance with paragraph (a).

11.21 Rules consequential on the making of the National Electricity Amendment (NEM Reliability Settings: Information Safety Net and Directions) Rule 2008 No. 6

11.21.1 Definitions

In this rule 11.21:

Amending Rule means the National Electricity Amendment (NEM Reliability Settings: Information Safety Net and Directions) Rule 2008 No. 6.

Commencement date means the date the Amending Rule commences operation.

11.21.2 EAAP guidelines

All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date for the purposes of preparing and publishing the first *EAAP guidelines* as required by clause 3.7C(p) are taken to satisfy the equivalent actions required for *EAAP guidelines* under rule 3.7C.

11.21.3 NEMMCO procedures for exercising RERT

(a) All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date for the purposes of developing and publishing the procedures for the exercise of the *RERT* as required by clause 3.20.7(e) are taken to satisfy the equivalent actions required for the procedures under clause 3.20.7.

(b) *NEMMCO* may develop, *publish*, and may amend from time to time, interim procedures for the exercise of the *RERT* under rule 3.20 at any time before it *publishes* the first procedures for that purpose as required by clause 3.20.7(e). For these purposes:

(1) *NEMMCO* is not required to develop, *publish* or amend those interim procedures in accordance with the *Rules consultation procedures*;

(2) those interim procedures must take into account the *RERT principles* and *RERT guidelines* or, if there are no *RERT guidelines* in existence at that time, the draft guidelines referred to in clause 11.21.4(b);

(3) those interim procedures must include measures as referred to in clause 3.20.7(e);

(4) those interim procedures will cease to apply when *NEMMCO publishes* the first procedures for the exercise of the *RERT* as required by clause 3.20.7(g); and

(5) for so long as those interim procedures apply, references in rule 3.20 to the procedures referred to in clause 3.20.7(e) are taken to include references to those interim procedures.

11.21.4 RERT guidelines

(a) All actions taken by the *Reliability Panel* prior to the commencement date in anticipation of the commencement date for the purposes of developing and *publishing* the first *RERT guidelines* as required by clause 3.20.8(c) are taken to satisfy the equivalent actions required for *RERT guidelines* under clause 3.20.8.

(b) If it exercises the *RERT* under rule 3.20 prior to the *publication* of the first *RERT guidelines* as required by clause 3.20.8(c), *NEMMCO* must take into account the draft guidelines set out in Appendix C.3 to the document entitled 'Comprehensive Reliability Review: Second Interim Report' issued by the *Reliability Panel* and dated August 2007.

11.21.5 Timetable

(a) *NEMMCO* must amend the *timetable* in accordance with clause 3.4.3(b) to take into account the Amending Rule and those amendments are to take effect from the commencement date.

(b) All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date to amend the *timetable* as required by paragraph (a) are taken to satisfy the equivalent action required under clause 3.4.3(b).

11.21.6 Power system security and reliability standards

(a) The *Reliability Panel* must amend the *power system security and reliability standards* in accordance with clause 8.8.3 to take into account the Amending Rule and those amendments are to take effect from the commencement date.

(b) All actions taken by the *Reliability Panel* prior to the commencement date in anticipation of the commencement date to amend the *power system security and reliability standards* as required by paragraph (a) are taken to satisfy the equivalent action required under clause 8.8.3.

11.21.7 Report on statement of opportunities

All actions taken by *NEMMCO* prior to the commencement date in anticipation of the commencement date for the purposes of preparing and providing a report to the *Reliability Panel* as required by clause 3.13.3(u) are taken to satisfy the equivalent actions required for preparing and providing a report under clause 3.13.3(u).

11.21.8 Methodology for dispatch prices and ancillary services prices

Minor or administrative amendments made by *NEMMCO* to the methodology for determining *dispatch prices* and *ancillary service prices* developed in accordance with clause 3.9.3(e) prior to the commencement date are taken to have been made under clause 3.9.3(g).

11.22 Rule consequent on the making of the National Electricity Amendment (Regulatory Test Thresholds and Information Disclosure on Network Replacements) Rule 2008

11.22.1 Definitions

In this rule 11.22:

amended definitions means the definitions of "new large transmission network asset" and "new small transmission network asset" as amended by the Amending Rule.

Amending Rule means the National Electricity Amendment (Regulatory Test Thresholds and Information Disclosure on Network Replacements) Rule 2008.

commencement date means the date on which the Amending Rule commences operation.

old definitions means the definitions of "new large transmission network asset" and "new small transmission network asset" as in force immediately before the commencement date.

11.22.2 Amending Rule does not affect existing regulatory test

The old definitions continue to apply in place of the amended definitions following the commencement date in respect of:

(a) a *new small transmission network asset* for which a *Transmission Network Service Provider* has set out the matters required under clauses 5.6.2A(b)(4) and (5) in an *Annual Planning Report published* prior to the commencement date;

(b) a *new small transmission network asset* not identified in an *Annual Planning Report* for which a *Transmission Network Service Provider* has *published* a report required under clause 5.6.6A(c) prior to the commencement date; and

(c) a *new large transmission network asset* for which a *Transmission Network Service Provider* has taken an action or commenced a process under the *Rules* which relies on or is referenced to the *Regulatory Test* (such as *publishing* an application notice under clause 5.6.6(c)) that has not completed prior to the commencement date.