



## **Draft National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2006**

under the National Electricity Law as applied by:

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

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

John Tamblyn  
Chairman  
Australian Energy Market Commission

**National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2006**

**1. Title of Rule**

This Rule is the *National Electricity Amendment (System Restart Ancillary Services and pricing under market suspension) Rule 2005*.

**2. Commencement**

This Rule commences operation on the day the notice of the making of the Rule is published in the South Australian Government Gazette.

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

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

**4. Notes**

Notes do not form part of this Rule.

## Schedule 1      Amendment of National Electricity Rules

(Clause 3)

### [1]      Clause 3.11.3

Omit clause 3.11.3 and substitute:

[Note the new 3.11.3 is the current Rule 3.11.4 with cross referencing changes]

#### 3.11.3      Acquisition of non-market ancillary services

- (a) *NEMMCO* must use reasonable endeavours to acquire the following non-market ancillary services in accordance with the remaining relevant provisions of this clause 3.11:
  - (1) *NCAS*; and
  - (2) *system restart*.
- (b) The requirements for services to give *NEMMCO* the capability to do the things referred to it in clause 3.11.3(a) must be met in the following ways:
  - (1) by *NEMMCO* setting minimum standards which are to be dealt with in *Registered Participants' connection agreements* for technical performance service; or
  - (2) by *NEMMCO* acquiring *ancillary services* in accordance with this clause 3.11 or giving a direction in accordance with clause 4.8.9.
- (c) *NEMMCO* must make and *publish* a set of *minimum technical ancillary service standards* that must be met by all *Registered Participants* who have entered into a *connection agreement*.
- (d) *NEMMCO* may amend the *minimum technical ancillary service standards* from time to time.
- (e) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *minimum technical ancillary service standards*.
- (f) In setting or amending *minimum technical ancillary service standards*, *NEMMCO* must:
  - (1) take into account the provisions of *connection agreements* existing at the time of setting or amending such standards;
  - (2) ensure that proposed *minimum technical ancillary service standards* do not impose more onerous material obligations on parties to existing *connection agreements*, as a whole, than are imposed by such existing *connection agreements*;

## DRAFT RULE

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- (3) take into account and minimise the additional costs overall that may arise from proposed *minimum technical ancillary service standards* for parties to existing *connection agreements*, as a whole; and
- (4) take into account the obligations imposed on parties to *connection agreements* by Chapter 5 and any *derogation* thereto.
- (g) The *minimum technical ancillary service standards* are not intended to, nor are to be read or construed as having the effect of:
  - (1) altering any term of a *connection agreement*;
  - (2) altering the contractual rights or obligations of any of the parties under a *connection agreement* as between those parties; or
  - (3) relieving the parties under any such *connection agreement* of their contractual obligations under such agreement or obligations under Chapter 5.
- (h) An amendment to the *minimum technical ancillary service standards* must not take effect until at least 30 days after the publication of the report required under the *Rules consultation procedures* in 3.11.3(e).
- (i) *NEMMCO* is not responsible for payment to a *Registered Participant* for services which must be provided by that *Registered Participant* under a *connection agreement* or under clause 4.9.2(b).
- (j) A *Network Service Provider* must advise *NEMMCO* of all *ancillary services* or similar services to be provided by a *Registered Participant* under a *connection agreement* to which it is a party.
- (k) *NEMMCO* may instruct a *Registered Participant* to provide a service agreed to be provided under a *connection agreement* of a kind described in clause 3.11.3(b) and any *Registered Participant* so instructed must use reasonable endeavours to comply with any such instruction.

### [2] **Clause 3.11.4**

Omit clause 3.11.4 and substitute:

[Note the new rule 3.11.4 is the existing rule 3.11.3 with appropriate changes to limit it to NCAS]

### **3.11.4 Procedure for determining quantities of network control ancillary services**

- (a) *NEMMCO* must develop and *publish* a detailed description of each *network control ancillary service*.

## DRAFT RULE

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- (b) *NEMMCO* must develop and *publish* a procedure for determining the quantities of each kind of *network control ancillary service* required for *NEMMCO*:
  - (1) to achieve the *power system security and reliability standards*; and
  - (2) where practicable to enhance *network* transfer capability whilst still maintaining a *secure operating state* when, in *NEMMCO's* reasonable opinion, the resultant expected increase in *network control ancillary service* costs will not exceed the resultant expected increase in benefits of trade from the *spot market*.
- (c) *NEMMCO* may amend the description developed under this clause 3.11.4, from time to time.
- (d) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending descriptions or procedures under this clause 3.11.4.

### [3] **Clauses 3.11.4A, 3.11.4B and 3.11.4C**

After clause 3.11.4 insert:

#### **3.11.4A Guidelines and objectives for acquisition of system restart ancillary services**

- (a) The objective for *system restart ancillary services* is to minimise the expected economic costs of a *major supply disruption*, taking into account the cost of supplying *SRAS*, consistent with the *NEM objective* (the "*SRAS objective*").
- (b) *NEMMCO* must use reasonable endeavours to acquire *system restart ancillary services* in accordance with the relevant provisions of this clause 3.11.
- (c) Each of the guidelines and *SRAS description* which *NEMMCO* is required to develop and *publish* in accordance with this clause 3.11.4A must:
  - (1) be consistent with the *SRAS objective*;
  - (2) be designed to ensure the *system restart standard* is met; and
  - (3) be designed to ensure that the need for *system restart ancillary services* in each *electrical sub-network* is met, to the extent that it is practicable and reasonable to do so, by *NEMMCO* entering into *ancillary services agreements* for the provision of *primary restart services*,(referred to collectively as the "*SRAS procurement objectives*").

## DRAFT RULE

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- (d) *NEMMCO* must develop and *publish* a detailed description of each type of *system restart ancillary service* in accordance with the guidelines determined by the *Reliability Panel* in accordance with clause 8.8.3(aa)(3), which description must identify:
  - (1) whether the *system restart ancillary service* is a *primary restart service* or a *secondary restart service*;
  - (2) the technical and availability requirements of each type of *system restart ancillary service*; and
  - (3) any other matter considered relevant by *NEMMCO*,(the "*SRAS description*").
- (e) *NEMMCO* must develop and *publish* guidelines for undertaking:
  - (1) modelling and assessment of the technical capabilities of *system restart ancillary services* proposed to be submitted as part of a *SRAS expression of interest* or in response to a *NMAS invitation to tender*;
  - (2) physical testing of *system restart ancillary services* being submitted as part of a *SRAS expression of interest* or in response to a *NMAS invitation to tender*; and
  - (3) any other analysis which *NEMMCO* considers appropriate,to demonstrate there is a reasonable degree of certainty that a *facility* is capable of delivering the relevant *system restart ancillary service* if required to do so (the "*SRAS assessment guidelines*").
- (f) *NEMMCO* must develop and *publish* guidelines for establishing the number, type and location of *system restart ancillary services* required to be procured for each *electrical sub-network* consistent with the *system restart* standard determined by the *Reliability Panel* (the "*SRAS quantity guidelines*").
- (g) *NEMMCO* may amend the *SRAS assessment guidelines*, the *SRAS quantity guidelines* and the *SRAS description* from time to time.
- (h) *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *SRAS assessment guidelines*, the *SRAS quantity guidelines* and the *SRAS description*.

### **3.11.4B Determination of electrical sub-network boundaries**

For the purpose of acquiring *system restart ancillary services* and determining and implementing the *system restart plan*, the market is to be divided into *electrical sub-networks*. The boundaries of the *electrical sub-networks* are to be determined from time to time by *NEMMCO* in accordance with the guidelines determined by the *Reliability Panel* under clause 8.8.3(aa)(4). *NEMMCO* must follow the *Rules consultation procedures* in determining *electrical sub-networks*.

## **3.11.4C Transitional provision for acquisition of non-market ancillary services**

- (a) All actions taken by *NEMMCO* or any *Rules body* prior to the commencement of this clause 3.11.4C (the "***NMAS commencement date***") in anticipation of the *NMAS commencement date* are deemed to be valid as at the *NMAS commencement date* to the extent that those actions were taken prior to the *NMAS commencement date* so far as practicable in accordance with the relevant provisions of the *Rules* (as though the relevant provisions of the *Rules* were in force at the time that the action was taken).
- (b) If *NEMMCO* has entered into an *ancillary services agreement* to acquire *non-market ancillary services* from a person prior to the *NMAS commencement date* (an "***existing NMAS contract***") then *NEMMCO* may continue to acquire such *non-market ancillary services* from that person under the *existing NMAS contract* and may extend the period of the *existing NMAS contract* for such period as *NEMMCO* and that person reasonably determine.
- (c) Until the *Reliability Panel* has determined a *system restart standard* under clause 8.8.3(a)(1a), *NEMMCO* must develop and *publish*, and may from time to time amend, a *system restart standard* which will apply as an interim standard until such time as the *Reliability Panel* develops and *publishes* a final *system restart standard*.

## **[4] Clause 3.11.5**

Omit clause 3.11.5 and substitute:

## **3.11.5 Tender process for non-market ancillary services**

- (a) Except as provided in clauses 3.11.5(n) and 4.8.9, if *NEMMCO* wishes to acquire a *non-market ancillary service*, then *NEMMCO* must call for offers in accordance with the *NMAS tender guidelines* from persons who are in a position to provide the *non-market ancillary service* so as to have the required effect at a *connection* to a *transmission network*.
- (b) *NEMMCO* must determine and *publish* the *NMAS tender guidelines*. Separate *NMAS tender guidelines* may be prepared in respect of *network control ancillary services* and *system restart ancillary services*. The *NMAS tender guidelines* must contain the following:
  - (1) a requirement for *NEMMCO* to call for *NMAS expressions of interest* before issuing an *NMAS*

## DRAFT RULE

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- invitation to tender* in relation to any required *non-market ancillary services*;
- (2) any requirement for persons submitting an *NMAS expression of interest* to have the relevant *facility* tested in accordance with the *NMAS assessment guidelines*;
  - (3) any requirement for a *Network Service Provider* or other *Registered Participant* to assist a prospective tenderer in identifying and, if possible, resolving issues that would prevent the delivery of effective *system restart ancillary services* proposed by a prospective tenderer;
  - (4) the time frames over which *NEMMCO's* assessment of *NMAS tenders* and physical testing of selected *non-market ancillary services* will occur;
  - (5) the period for which each *non-market ancillary service* would be contracted;
  - (6) any requirement for tenderers to provide data, models and parameters of relevant *plant*, sufficient to facilitate a thorough assessment of the *network* impacts and *power station* impacts of the use of the relevant *non-market ancillary service*;
  - (7) the minimum terms and conditions of the *ancillary services agreement* successful tenderers would be expected to enter into with *NEMMCO*;
  - (8) the principles which *NEMMCO* must adopt in assessing *NMAS tenders*; and
  - (9) any other matter considered appropriate by *NEMMCO*.
- (c) *NEMMCO* may amend the *NMAS tender guidelines* from time to time. *NEMMCO* must comply with the *Rules consultation procedures* when making or amending the *NMAS tender guidelines*.
- (d) A *Registered Participant* is not under any obligation to submit an *NMAS tender* in response to an *NMAS invitation to tender*.
- (e) *NEMMCO* is not under any obligation to accept the lowest priced *NMAS tender* or any *NMAS tender* in response to an *NMAS invitation to tender*.
- (f) A *Network Service Provider* must:



## DRAFT RULE

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- (1) negotiate in good faith with prospective tenderers in respect of issues which the *NMAS tender guidelines* require prospective tenderers to discuss and, if possible, resolve with *Network Service Providers*; and
  - (2) participate in, or facilitate, testing of a *system restart ancillary service* which is required by the *NMAS tender guidelines* where it is reasonable and practicable to do so, and when participating in or facilitating such activities the *Network Service Provider* will be entitled to recover from the relevant prospective tenderer all reasonable costs incurred by the *Network Service Provider* and for such purposes the activities of the *Network Service Provider* will be treated as *excluded services*.
- (g) Where a *Registered Participant* submits a *NMAS tender* in response to a *NMAS* invitation to tender and *NEMMCO* wishes to negotiate an aspect of that *NMAS tender*, then *NEMMCO* and the *Registered Participant* must negotiate in good faith concerning that aspect.
- (h) Subject to clause 3.11.5(i), *NEMMCO* must not acquire *non-market ancillary services* from any person who is not a *Registered Participant*.
- (i) *NEMMCO* may enter into an agreement to acquire *non-market ancillary services* with a person who is not a *Registered Participant* if that agreement includes a condition for the benefit of *NEMMCO* that no *ancillary services* will be provided under the agreement until that person becomes a *Registered Participant*.
- (j) If *NEMMCO* calls for offers under clause 3.11.5(a) in respect of a kind of *non market ancillary service*, then *NEMMCO* must notify *Registered Participants* when it believes that it has available, under *ancillary services agreements*, a sufficient quantity of that kind of *non market ancillary service* (as determined by applying the procedure developed under clause 3.11.4 or clause 3.11.4A(f) (whichever is relevant)).
- (k) Within 5 business days of *NEMMCO* giving a notice under clause 3.11.5(j), *NEMMCO* must *publish* the total quantity of each kind of *non market ancillary service* acquired by *NEMMCO* pursuant to *ancillary services agreements* under this clause 3.11.5.
- (l) A *Registered Participant* must comply with an *ancillary services agreement* between the *Registered Participant* and *NEMMCO* under which the *Registered Participant* provides one or more *non-market ancillary services*.

## DRAFT RULE

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- (m) *NEMMCO* may acquire a *system restart ancillary service* under an *ancillary services agreement* (a "***bilateral SRAS contract***") entered into with a *Registered Participant* without following the *NMAS tender process* where:
- (1) in *NEMMCO's* opinion, acting reasonably, the *bilateral SRAS contract* would provide better value for money than could be obtained through the tender process being conducted under the *NMAS tender guidelines* at the time the *bilateral SRAS contract* is entered into;
  - (2) the period of the *bilateral SRAS contract* is for a longer period than the period of the contracts being offered by *NEMMCO* in accordance with the tender process being conducted under the *NMAS tender guidelines* at the time the *bilateral SRAS contract* is entered into; and
  - (3) the *bilateral SRAS contract* is consistent with the *system restart standard*.
- (n) Any dispute concerning any aspect of an *ancillary services agreement* or a tender conducted by *NEMMCO* for the acquisition of *non-market ancillary services* must be dealt with in accordance with clause 8.2.

### [5] **Clause 3.14.5**

Omit clause 3.14.5 and substitute:

#### **3.14.5 Pricing during market suspension**

- (a) If *NEMMCO* declares that the *spot market* is suspended then, as far as *NEMMCO* considers it practically and reasonably possible, the procedures for *PASA*, *dispatch* and *spot price* and *ancillary service price* determination are to be followed in accordance with the provisions of the *Rules*, subject to the application of this clause 3.14.5.
- (b) The *spot price* and the *ancillary service price* during a *trading interval* for which *NEMMCO* has declared the *spot market* to be suspended is to be determined by *NEMMCO* in accordance with this clause 3.14.5.
- (c) Subject to clauses 3.14.5(d), (g) and (j), if the *spot market* is suspended in a *region* then *dispatch* and the determination of *spot prices* and *ancillary service prices* in the *region* where the *spot market* is suspended are to continue in accordance with clauses 3.8 and 3.9.
- (d)

## DRAFT RULE

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If at any time on or during suspension of the *spot market* in a *region*:

- (1) in *NEMMCO's* reasonable opinion it is not possible to continue *dispatch* and the determination of *spot prices* in the *suspended region* in accordance with clauses 3.8 and 3.9;
- (2) the *suspended region* is connected by an *unconstrained interconnector* to another *region*;
- (3) the *dispatch* and determination of *spot prices* and *ancillary service prices* in the other *region* is continuing in accordance with clauses 3.8 and 3.9; and
- (4) *local market ancillary service requirements* do not apply in the *suspended region*,

then *NEMMCO* must:

- (5) determine the *spot price* in the *suspended region* in accordance with clause 3.14.5(e); and
  - (6) continue to determine *ancillary service prices* in the *suspended region* in accordance with clauses 3.8 and 3.9.
- (e) In the circumstances described in clause 3.14.5(d) the *spot price* is to be determined by application of an appropriate *inter-regional loss factor* to the *spot price* in the adjacent *region* referred to in clause 3.14.5(d)(2), such *inter-regional loss factor* being determined by *NEMMCO* in accordance with the principles in clause 3.6.2A and the actual flows on the relevant *unconstrained interconnectors*.
- (f) If the *spot price* in the *suspended region* is being determined in accordance with clause 3.15.4(e), the *spot price* must continue to be determined in accordance with that clause until the earlier of:
- (1) the time that the *spot market* is no longer suspended in the *region*; and
  - (2) the time that the *spot price* in the *region* is required to be determined in accordance with either clause 3.14.5(g) or clause 3.14.5(j).
- (g) If at any time on or during suspension of the *spot market* in a *region*:
- (1) either:
    - (A) *dispatch* and the determination of *spot prices* and *ancillary service prices* is being effected in accordance with clauses 3.8 and 3.9; or
    - (B) the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.14.5(e);

## DRAFT RULE

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- (2) in *NEMMCO's* reasonable opinion it is no longer practical to continue *dispatch* and the determination of *spot prices* and *ancillary service prices* in the *suspended region* in accordance with the clauses under which *dispatch*, *spot prices* and *ancillary service prices* are currently being determined; and
- (3) in *NEMMCO's* reasonable opinion a current *pre-dispatch schedule* exists in respect of the *suspended region*,

then *NEMMCO* must determine the *spot prices* and *ancillary service prices* in the *suspended region* in accordance with clause 3.14.5(h).

- (h) In the circumstances described in clause 3.14.5(g), the *spot prices* and *ancillary service prices* in the *suspended region* are set at *NEMMCO's* forecast *regional reference price* and *ancillary service prices* determined in accordance with the most recently published *pre-dispatch schedule* if it is still current.
- (i) If the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.15.4(h), they must continue to be determined in accordance with that clause until the earlier of:
  - (1) the time that the *spot market* is no longer suspended in the relevant *region*; and
  - (2) the time that the *spot prices* or the *ancillary service prices* (as the case may be) in the *suspended region* are determined in accordance with clause 3.14.5(j).
- (j) If at any time on or during suspension of the *spot market* in a *region*:
  - (1) either:
    - (A) *dispatch* and the determination of *spot prices* and *ancillary service prices* is being effected in accordance with clauses 3.8 and 3.9; or
    - (B) the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with either clause 3.14.5(e) or clause 3.14.5(h); and
  - (2) in *NEMMCO's* reasonable opinion it is no longer practical to set the *spot prices* and *ancillary service prices* in the *suspended region* in accordance with either clauses 3.8, 3.9, 3.14.5(e) or 3.14.5(h) (as the case may be),

## DRAFT RULE

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then *NEMMCO* must set the *spot prices* and *ancillary service prices* in the *suspended region* at the prices set out in the relevant market suspension pricing schedule developed and published in accordance with clause 3.14.5(1).

- (k) If the *spot prices* and *ancillary service prices* in the *suspended region* are being determined in accordance with clause 3.15.4(j), they must continue to be determined in accordance with that clause until the *spot market* is no longer suspended in that *region*.
- (l) *NEMMCO* must:
  - (1) develop in accordance with the *Rules consultation procedures* a methodology to be used by *NEMMCO* ("estimated price methodology") to prepare and update schedules containing reasonable estimates of typical *market prices* during the periods to which the schedules relate ("estimated price schedules");
  - (2) develop and update estimated price schedules in accordance with the estimated prices methodology and which set out *NEMMCO's* reasonable estimate of typical *market prices* during periods in which the *spot market* is suspended; and
  - (2) *publish* the estimated price methodology promptly after it has been developed and *publish* the estimated price schedule at least 14 days prior to the first day to which the schedule relates.
- (m) If a *spot price* is set in accordance with clause 3.14.5(g) or clause 3.14.5(j) at a *regional reference node* ("suspension node"), *spot prices* at all other *regional reference nodes* connected by an *interconnector* that has an actual flow towards the *suspension node* must not exceed the *spot price* in the *suspended region* multiplied by the average *loss factor* between that *regional reference node* and the *suspension node* for that *trading interval*. *NEMMCO* must use reasonable endeavours to ensure that any adjustments required to *regional reference prices* so that they do not exceed the limits set by this clause 3.14.5(m) are finalised as soon as practicable but in any event by no later than one *business day* following the day on which the *spot market* in the *region* ceased to be suspended.
- (n) *NEMMCO* must calculate the average *loss factor* applicable to clause 3.14.5(m) by reference to the *inter-regional loss factor* equations relating to the relevant *regulated interconnector*.

# DRAFT RULE

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**[6] Clause 4.2.6(e)**

Omit clause 4.2.6(e) and substitute:

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

**[7] Clause 4.3.1**

Omit clause 4.3.1(p) and substitute:

- (p) to procure adequate *system restart ancillary services* in accordance with clause 3.11.4A to enable *NEMMCO* to coordinate a response to a *major supply disruption*;

**[8] Clause 4.8.3**

Omit clause 4.8.3(b) and substitute:

- (b) Without limitation, such circumstances may include:
  - (1) electricity *supply* capacity shortfall, being a condition where there are insufficient *generation* or *supply* options available to securely *supply* the total load in a *region*;
  - (2) unexpected disruption of *power system security*, which may occur when:
    - (i) an unanticipated major *power system* or *generation plant contingency event* occurs; or
    - (ii) significant environmental or similar conditions, including weather, storms or fires, are likely to, or are affecting, the *power system*; or
  - (3) a *major supply disruption*.

**[9] Clause 4.8.12**

Omit clause 4.8.12 and substitute:

**4.8.12 System restart plan and local black system procedures**

- (a) *NEMMCO* must prepare, and may from time to time amend, a *system restart plan* for the purpose of managing and coordinating system restoration activities during any *major supply disruption*.
- (b) The *system restart plan* is *confidential information*.
- (c) The *system restart plan* must be consistent with the *system restart standard*.
- (d) Each *Generator* and *Network Service Provider* must develop *local black system procedures* in accordance with the guidelines established in accordance with clause 4.8.12(e). A *Generator's* or *Market Network Service Provider's local black system procedures* must be consistent with any *ancillary services agreement* to provide *system restart ancillary services* to which that *Generator* or *Market Network Service Provider* is a party. On request from *NEMMCO*, or as a result of a significant change of circumstances, a *Generator* or *Network Service Provider* must review, and amend if appropriate, its *local black system procedures*.
- (e) Subject to clause 4.8.12(f), *NEMMCO* must develop and *publish*, and may from time to time amend, guidelines for the preparation of *local black system procedures* in consultation with *Generators* and *Network Service Providers*.
- (f) *Local black system procedures* must:
  - (1) provide sufficient information to enable *NEMMCO* to understand the likely condition and capabilities of *plant* following any *major supply disruption* such that *NEMMCO* is able to effectively coordinate the safe implementation of the *system restart plan*; and
  - (2) appropriately incorporate any relevant *energy support arrangements* to which a *Generator* or *Network Service Provider* may be party.
- (g) Each *Generator* and *Network Service Provider* must submit its *local black system procedures*, including any amendments to those procedures, to *NEMMCO* for approval. In considering whether to approve *local black system procedures* or amendments to such procedures, *NEMMCO* will take into account the consistency of the *local black system procedures* with:

## DRAFT RULE

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- (1) the guidelines established in accordance with clause 4.8.12(e); and
  - (2) relevant components of the *system restart plan*.
- (h) *NEMMCO* may request amendments to *local black system procedures*, including, without limitation, imposing conditions in respect of any *energy support arrangement* as *NEMMCO* reasonably considers necessary to ensure the integrity of the *system restart plan*. When requesting amendments to the *local black system procedures*, *NEMMCO* must provide reasons for those requested amendments.
- (i) Requests by *NEMMCO* for amendments under clause 4.8.12(h) must be by notice in writing to a *Generator or Network Service Provider*. Reasonable requests by *NEMMCO* for amendments under clause 4.8.12(h) must be complied with by a *Generator or Network Service Provider*.
- (j) *NEMMCO* and *Network Service Providers* must jointly develop communication protocols to facilitate the exchange of all information relevant to the roles played by *NEMMCO*, *Network Service Providers*, *Generators and Customers* in the implementation of the *system restart plan*.

**[10] Clause 4.8.13**

Omit clause 4.8.13.

**[11] Clause 4.8.14**

Omit clause 4.8.14 and substitute:

**4.8.14 Power system restoration**

- (a) *NEMMCO* must notify a *Registered Participant* if, in *NEMMCO's* reasonable opinion, there is a *major supply disruption* which is affecting, or which may affect, that *Registered Participant*.
- (b) If *NEMMCO* advises a *Generator or Network Service Provider* of a *major supply disruption*, or if the terms of the relevant *local black system procedures* require the *Generator or Network Service Provider* to take action, then the *Generator or Network Service Provider* must comply with the requirements of the *local black system procedures* as quickly as it is reasonably able to comply.



## DRAFT RULE

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- (c) Where in *NEMMCO's* reasonable opinion the *system restart plan* cannot be implemented to effectively ameliorate the actual power system conditions created by a *major supply disruption*, *NEMMCO* may adapt or vary the *system restart plan* as it considers reasonably necessary to suit those actual power system conditions.
- (d) If there is a *major supply disruption*, a *Generator* or *Network Service Provider* must comply with *NEMMCO's* directions under clause 4.8.9 regarding the restoration of the *power system*.
- (e) If there is a *major supply disruption*, a *Market Customer* must comply with *NEMMCO's* directions under clause 4.8.9 with respect to the timing and magnitude of *load* restoration.

### [12] Clause 8.8.1

After clause 8.8.1(a)(1) insert:

- (1a) on the advice of *NEMMCO* determine the *system restart standard*;

### [13] Clause 8.8.3

After clause 8.8.3(a)(1) insert:

- (1a) the *system restart standard*;

### [14] Clause 8.8.3(aa)

After clause 8.8.3(a) insert:

- (aa) The *system restart standard* must:
  - (1) apply equally across all *regions*, but the *Reliability Panel* may vary the *system restart standard* between *electrical sub-networks* to the extent necessary:
    - (A) to reflect any technical system limitations or requirements; or
    - (B) if the benefits of adopting the *system restart standard* would be outweighed by the costs of implementing such a standard;

- (2) identify the maximum amount of time within which *system restart ancillary services* are required to restore service to a particular level;
- (3) include guidelines on the required reliability of *primary restart services* and *secondary restart services*;
- (4) include guidelines to be followed by *NEMMCO* in determining *electrical sub-networks*, including in relation to determining the appropriate number of *electrical sub-networks* and the characteristics required within an *electrical sub-network* (such as the amount of generation or *load*, or electrical distance between groups of generators, within an *electrical sub-network*);
- (5) include guidelines specifying the diversity and strategic locations required of *primary restart services* and *secondary restart services*;

**[15] Clause 8.8.3(b)**

Omit clause 8.8.3(b) and substitute:

- (b) At least once each calendar year and at such other times as the *AEMC* may request, the *Reliability Panel* must conduct a review of the performance of the *market* in terms of *reliability* of the *power system*, the *power system security* and *reliability standards*, the *system restart standard*, the guidelines referred to in clause 8.8.1(a)(3) and the policies and guidelines referred to in clause 8.8.1(a)(4) in accordance with this clause 8.8.3.

**[16] Chapter 10 – New definitions**

In Chapter 10 insert the following new definitions in alphabetical order:

***bilateral SRAS contract***

Has the meaning given in clause 3.11.5(m).

***electrical sub-network***

A part of the national grid determined by *NEMMCO* under clause 3.11.4B in accordance with the guidelines determined by the *Reliability Panel* under clause 8.8.3(aa)(4).

***energy support arrangement***

## DRAFT RULE

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A contractual arrangement between *NEMMCO* and a customer or *participating jurisdiction* under which *facilities* not subject to an *ancillary services agreement* for the provision of *SRAS* are used to assist *supply* to a customer during a *major supply disruption* affecting that customer.

### ***existing NMAS contract***

Has the meaning given in clause 3.11.4C(b)

### ***major supply disruption***

The unplanned absence of *voltage* on a part of the *transmission system*, affecting one or more *power stations*.

### ***NEM objective***

Has the meaning given in section 7 of the National Electricity Law.

### ***NMAS commencement date***

Has the meaning set out in clause 3.11.4C(a).

### ***NMAS invitation to tender***

In respect of *non-market ancillary services*, a document issued by *NEMMCO* calling for *NMAS tenders* in accordance with clause 3.11.5(a).

### ***NMAS tender***

An offer submitted by a person in response to an *NMAS invitation to tender*.

### ***NMAS tender guidelines***

The guidelines determined in accordance with clause 3.11.5(b), which may comprise separate guidelines in respect of:

- (a) *network control ancillary services*; and
- (b) *system restart ancillary services*.

### ***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) in accordance with the guidelines determined by the *Reliability Panel* under clause 8.8.3(aa)(3).

### ***secondary restart service***

A *system restart ancillary service* that meets the technical and availability requirements of a *secondary restart service* specified by *NEMMCO* under

## DRAFT RULE

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clause 3.11.4A(d) in accordance with the guidelines determined by the *Reliability Panel* under with clause 8.8.3(aa)(3).

### ***SRAS assessment guidelines***

The guidelines determined and published by *NEMMCO* in accordance with clause 3.11.4A(e).

### ***SRAS description***

Has the meaning given in clause 3.11.4A(d).

### ***SRAS expression of interest***

The response to a call by *NEMMCO* in accordance with clause 3.11.5, for expressions of interest to provide *system restart ancillary services*.

### ***SRAS objective***

The objective set out in clause 3.11.4A(a).

### ***SRAS procurement objectives***

The objectives set out in clause 3.11.4A(c).

### ***SRAS quantity guidelines***

The guidelines developed and published by *NEMMCO* in accordance with clause 3.11.4A(f).

***suspended region*** means a region in which the spot market is suspended in accordance with clause 3.14.3(a).

### ***system restart ancillary service or SRAS***

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***

Until it is replaced, the interim standard as determined by *NEMMCO* in accordance with clause 3.11.4C(c), and thereafter its replacement being 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*.

## [17] Chapter 10 – Deleted definitions

Delete the following definitions:

*black start-up facilities*

*system restart*

## [18] Chapter 10 – Replaced definitions

Delete the current corresponding definitions and replace them with the following definitions:

*black start capability*

A capability which 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.

*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.

## DRAFT RULE

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### ***network control ancillary services or NCAS***

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.

### ***non-market ancillary services***

*Network control ancillary services* and *system restart ancillary services*.

### ***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*.