



## **Draft National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2007**

under the National Electricity Law as applied by:

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

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

John Tamblyn  
Chairman  
Australian Energy Market Commission

## **Draft National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2007**

### **1. Title of Rule**

This Rule is the *Draft National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2007*.

### **2. Commencement**

Schedule 1 of this Rule commences operation on [the date the final determination is made].

Schedule 2 of this Rule commences operation on 1 January 2009.

*[Drafting Note: Schedule 2 of this Draft Rule has been drafted on the basis of a commencement date of 1 January 2009. Should a date before or after this date be selected as the commencement date, drafting instructions will need to include the amendments to clause 3.15.6A(k) that will commence operation on 1 January 2009 as part of the National Electricity Amendment (Cost Recovery of Localised Regulation Services) Rule 2007 No.5.*

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

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

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

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

## **Schedule 1      Amendment of National Electricity Rules**

(Clause 3)

### **[1]    Clause 2.2.1                    Registration as a Generator**

Omit clause 2.2.1(e)(1) and substitute:

- (1) obtain the approval of *NEMMCO* to classify each of the *generating units* that form part of the *generating system* that the person owns, operates or controls, or from which it otherwise sources electricity, as:
  - (i) a *scheduled generating unit*;
  - (ii) a *semi-scheduled generating unit*; or
  - (iii) a *non-scheduled generating unit*;

### **[2]    Clause 2.2.2                    Scheduled Generator**

Omit the clause 2.2.2(a) and substitute:

- (a) A *generating unit* which has a *nameplate rating* of 30 MW or greater or is part of a group of *generating units connected* at a common *connection point* with a combined *nameplate rating* of 30 MW or greater must be classified as a *scheduled generating unit* unless *NEMMCO* approves its classification as:
  - (1) a *semi-scheduled generating unit* under clause 2.2.7(b);
  - (2) a *non-scheduled generating unit* in accordance with clause 2.2.3(b).

### **[3]    Clause 2.2.3                    Non-Scheduled Generator**

Omit the clause 2.2.3 and substitute:

#### **2.2.3      Non-Scheduled Generator**

- (a) A *generating unit* with a *nameplate rating* of less than 30 MW (not being part of a group of *generating units* described in clause 2.2.2(a)) must be classified as a *non-scheduled generating unit* unless *NEMMCO* approves its classification as:
  - (1) a *scheduled generating unit* under clause 2.2.2(b); or
  - (2) a *semi-scheduled generating unit* under clause 2.2.7(b).

- (b) A person must not classify a *generating unit* as a *non-scheduled generating unit* unless it has obtained the approval of *NEMMCO* to do so. *NEMMCO* must approve the classification if it is satisfied that:
  - (1) the primary purpose for which the relevant *generating unit* operates is local use and the aggregate *sent out generation* at its *connection point* rarely, if ever, exceeds 30 MW; or
  - (2) the physical and technical attributes of the relevant *generating unit* are such that it is not practicable for it to participate in *central dispatch*.
- (c) If in relation to an application under paragraph (b), in *NEMMCO*'s opinion it is necessary for any reason (including *power system security*) for the relevant *Generator* to comply with some of the obligations of a *Scheduled Generator* or *Semi-Scheduled Generator* for that *generating unit*, *NEMMCO* may approve the classification on such terms and conditions as *NEMMCO* considers reasonably necessary.
- (d) A person must comply with any terms and conditions imposed by *NEMMCO* under paragraph (c).
- (e) A *Generator* is taken to be a *Non-Scheduled Generator* only in so far as its activities relate to a *non-scheduled generating unit*.
- (f) Subject to clause 3.8.2(e), the *non-scheduled generating units* of a *Generator* do not participate in the co-ordinated *central dispatch* process operated by *NEMMCO*.

#### **[4] New clause 2.2.7 Semi Scheduled Generator**

After the clause 2.2.6, insert:

##### **2.2.7 Semi-Scheduled Generator**

- (a) A *generating unit* which has a *nameplate rating* of 30 MW or greater or is part of a group of *generating units connected* at a common *connection point* with a combined *nameplate rating* of 30 MW or greater, must be classified as a *semi-scheduled generating unit* where the output of the *generating unit* is *intermittent* unless *NEMMCO* approves its classification as:
  - (1) a *scheduled generating unit* under clause 2.2.2(b); or
  - (2) a *non-scheduled generating unit* under clause 2.2.3(b).
- (b) A person must not classify a *generating unit* as a *semi-scheduled generating unit* unless it has obtained the approval of *NEMMCO* to do so.

- (c) *NEMMCO* must approve a request for classification as a *semi-scheduled generating unit* if it is satisfied that the output of the *generating unit* is *intermittent* and that the person:
  - (1) has submitted data in accordance with schedule 3.1; and
  - (2) has adequate communications and telemetry to support the issuing of *dispatch instructions* and the audit of responses.
- (d) In relation to an application under paragraph (b) to classify a *generating unit* with a *nameplate rating* of less than 30 MW, or a *generating unit* that is part of a group of *generating units connected* at a common *connection point* with a combined *nameplate rating* of less than 30 MW, as a *semi-scheduled generating unit*, *NEMMCO* may approve the classification on such terms and conditions as *NEMMCO* considers appropriate.
- (e) A person must comply with any terms and conditions imposed by *NEMMCO* as part of an approval under paragraph (d).
- (f) A *Generator* is taken to be a *Semi-Scheduled Generator* only in so far as its activities relate to a *semi-scheduled generating unit*.
- (g) A *Semi-Scheduled Generator* must operate a *semi-scheduled generating unit* in accordance with the co-ordinated *central dispatch* process operated by *NEMMCO* under the provisions of Chapter 3.
- (h) At the time that a person makes a request for *NEMMCO* to classify a *semi-scheduled generating unit* under paragraph (c), that person may request to register two or more *generating units* as one *semi-scheduled generating unit* when the *generating units* are:
  - (1) identical in make, model and capacity; and
  - (2) *connected* at the same *connection point*,and *NEMMCO* must accept the request.
- (i) Notwithstanding that one or more of the conditions set out in paragraph (h) may not have been fulfilled by the *Semi-Scheduled Generator*, *NEMMCO* may approve a request received under paragraph (h) if registration as a single *semi-scheduled generating unit* would not materially distort *central dispatch* or adversely affect *power system security*.
- (j) Where *NEMMCO* approves a request to register two or more *semi-scheduled generating units* as a one *semi-scheduled generating unit* in accordance with paragraphs (h) or (i), the *semi-scheduled unit* will be taken to be one *semi-scheduled generating unit* for the purposes of the *Rules*.
- (k) For the avoidance of doubt, a *Semi-Scheduled Generator* which operates two or more *semi-scheduled generating units* that could have been registered as a single *semi-scheduled generating unit* under

paragraph (h) but were not so registered, may subsequently aggregate those *generating units* in accordance with clause 3.8.3

**[5] Clause 2.11.3 Budgeted revenue requirements**

In clause 2.11.3(b)(8), after the words “from *Scheduled Generators*” and insert the words “, *Semi-Scheduled Generators*”.

**[6] Rule 2.12 Interpretation of References to Various Registered Participants**

In rules 2.12(b)(1), (2) and (8)(i), after the words “*scheduled generating units*”, wherever occurring, insert the words “*semi-scheduled generating units*,”.

**[7] Rule 2.12**

In rule 2.12(b)(2), after the words “a “*Scheduled Generator*,”” insert the words “ “*Semi-Scheduled Generator*”, ”.

**[8] Clause 5.7.7 Inter-network power system tests**

In clause 5.7.7(d), after the words “*scheduled generating unit*,”, insert the words “*semi-scheduled generating unit*”.

**[9] Clause S5.2.5.11 Frequency control**

Omit clause S5.2.5.11(a) and substitute:

- (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*.

#### [10] Clause S5.2.5.11

Omit clause S5.2.5.11(e) and substitute:

- (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*.

#### [11] Clause S5.2.5.14 Active power control

Omit clauses S5.2.5.14(a) – (c) and substitute:

- (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 *dispatch* level 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 its *active power* output within five 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); and
  - (iii) not changing its *active power* output within five minutes by more than the raise and lower amounts specified in an instruction electronically issued by a *control centre*.

**Minimum access standard**

- (b) The *minimum 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*, 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) subject to energy source availability, for a *semi-scheduled generating unit* or a *semi-scheduled generating system*:
  - (i) reducing its *active power* output within five minutes, to or below the level specified in an instruction electronically issued by a *control centre*;
  - (ii) not changing its *active power* output, to or below the level specified in subparagraph (i); and
  - (ii) automatically limiting its *active power* within five minutes by more than the raise or lower amounts specified in an instruction electronically issued by a *control centre*.

**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.

**[12] Clause S5.2.6.1 Remote monitoring**

Omit clause S5.2.6.1 and substitute:

**S5.2.6.1 Remote Monitoring**

**Automatic access standard**

- (a) The *automatic access standard* is a:
  - (1) *scheduled generating unit*;
  - (2) *non-scheduled generating unit* with a *nameplate rating* of 30 MW or more;
  - (3) *non-scheduled generating system* with a combined *nameplate rating* of 30 MW or more;
  - (4) *semi-scheduled generating unit*;
  - (5) *semi-scheduled generating system*; or
  - (6) *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.

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

In clause 8.2.1(h)(13), omit the word “or”.

**[14] Clause 8.2.1**

After clause 8.2.1(14), insert:

- ; or
- (15) a decision by *NEMMCO* under clause 2.2.7 not to approve the classification of a *semi-scheduled generating unit*.

**[15] Chapter 10 Substituted definitions**

Omit the following definitions and substitute:

**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), 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*.

**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 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 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) aggregated in accordance with clause 3.8.3.

**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.

**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*.

**[16] Chapter 10 New definitions**

Insert the following new definitions in alphabetical order:

**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) 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.

**[17] Chapter 11 Savings and Transitional Rules**

After rule 11.10, insert

**11.X Rules consequent on making the National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2007**

**11.X.1 Definitions**

In rule 11.X:

**Amending Rule** means the National Electricity Amendment (Central Dispatch and Integration of Wind and Other Intermittent Generation) Rule 2007.

**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 meets the following requirements:

- (a) the project proponent has acquired, or has commenced conveyancing to acquire, land for the construction of the project;
- (b) 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 project proponent has obtained all required planning and construction approvals and licences, including completed and approved environmental impact statements;
- (d) financing arrangements for the project, including debt plans, have been finalised and contracts executed; and
- (e) construction has either commenced or a firm date has been set for it to commence.

**registration date** means the date on which Schedule 1 of the Amending Rule commences operation.

**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.

**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 4.2.2: Committed NEM Wind Farms" of the 2007 *statement of opportunities*; or
- (c) is considered to be a committed project as at 1 January 2008.

#### 11.X.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 units 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.X.3 Registered generating unit**

- (a) Subject to paragraph (b) and clause 11.X.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.

### **11.X.4 Classification of potential semi-scheduled generating unit**

- (a) On and after the registration date, a potential semi-scheduled generating unit may apply to *NEMMCO* to be classified as:
  - (1) a *non-scheduled generating unit* in accordance with clause 2.2.3;  
or
  - (2) a *scheduled generating unit* in accordance with clause 2.2.1.
- (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 *non-scheduled generating unit*;
  - (2) in the case of an application referred in paragraph (a)(2) as an application to be classified as a *scheduled generating unit*.
- (c) If application for classification of a potential semi-scheduled generating unit made under this clause 11.X.2 is approved by *NEMMCO* in accordance with clause 2.2.3 or 2.2.1, the relevant unit is taken to be a *non-scheduled generating unit* or *scheduled generating unit* (as the case may be) for the purposes of the *Rules*.

### **11.X.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.X.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.X.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).



---

**Schedule 2      Amendment of National Electricity Rules**

(Clause 4)

**[1]    Clause 3.7.1                      Administration of PASA**

Omit clauses 3.7.1(c) and (d) and substitute:

- (c)    On a weekly basis *NEMMCO* must:
  - (1)    collect and analyse information from all *Scheduled Generators, Market Customers, Transmission Network Service Providers* and *Market Network Service Providers* about their intentions for:
    - (i)    *generation, transmission* and *Market Network Service maintenance* scheduling;
    - (ii)   *intended plant* availabilities;
    - (iii)   *energy constraints*;
    - (iv)   other *plant* conditions which could materially impact upon *power system security*; and
    - (v)    significant changes to *load* forecasts previously notified to *NEMMCO*,for the following 24 months;
  - (2)    include the *unconstrained intermittent generation forecasts* for the following 24 months; and
  - (3)    following analysis and assessment of the information referred to subparagraphs (1) and (2), *publish* information that will:
    - (i)    assist *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* to plan any scheduled work on *plant*; and
    - (ii)   inform the *market* of possible *power system security* problems.
- (d)    *NEMMCO* must use its reasonable endeavours to ensure that it provides to *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* sufficient information to allow *Scheduled Generators* and *Market Participants* to undertake maintenance and *outage* planning without violating *power system security* and to allow the *market* to operate effectively with a minimal amount of intervention by *NEMMCO*.

**[2]    Clause 3.7.2                      Medium term PASA**

Omit paragraphs (b) to (g) of clause 3.7.2 and substitute:

- (b) *NEMMCO* may publish additional updated versions of the *medium term PASA* in the event of *changes* which, in the judgment of *NEMMCO*, are materially significant and should be communicated to *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants*.
- (c) The following *PASA* inputs are to be prepared by *NEMMCO*:
  - (1) forecast *load* which is:
    - (i) to indicate for each *region* the most probable *peak load*, time of the peak, and daily *energy* on the basis of past trends, day type and special events including all anticipated *scheduled load* and other *load* except pumped storage loads;
    - (ii) subsequently to be adjusted by an amount anticipated in the forecast as *scheduled load* by *load* bidders; and
    - (iii) an indicative half hourly *load* profile for each day type for each *region* for each month of the year;
  - (2) reserve requirements of each *region* determined in accordance with the *medium term capacity reserve standards* set out in the *power system security and reliability standards*; and
  - (3) forecast *inter-regional network constraints* and *intra-regional network constraints* known to *NEMMCO* at the time.
- (d) The following *medium term PASA* inputs must be submitted by each relevant *Scheduled Generator* or *Market Participant* in accordance with the *timetable*:
  - (1) *PASA availability* of each *scheduled generating unit, scheduled load* or *scheduled network service* for each *day*; and
  - (2) weekly *energy constraints* applying to each *scheduled generating unit* or *scheduled load*.
- (e) *Network Service Providers* must provide to *NEMMCO* an outline of planned *network outages* in accordance with the *timetable* and provide to *NEMMCO* any other information on planned *network outages* that is reasonably requested by *NEMMCO* to assist *NEMMCO* to meet its obligations under paragraph (f)(4).
- (f) *NEMMCO* must prepare and *publish* the following information in respect of each *day* covered by the *medium term PASA* in accordance with clause 3.13.4:
  - (1) forecasts of the most probable peak *power system load* plus required *reserve*, adjusted to make allowance for *scheduled load*, for each *region* and for the total *power system*;
  - (2) the aggregated MW allowance (if any) made by *NEMMCO* for *generation* from *non-scheduled generating systems* in each

- forecast of the most probable peak *power system load* referred to subparagraph (1);
- (3) in respect of each forecast of the most probable peak *power system load* referred to in subparagraph (1), a value that is the sum of that forecast and the relevant aggregated MW allowance referred to in subparagraph (2);
  - (4) forecasts of the most probable *energy* consumption for each *region* and for the total *power system*;
  - (5) aggregate *generating unit PASA availability* for each *region*, calculated by adding the following categories:
    - (i) the capacity of *scheduled generating units* that are able to operate at the full offered *PASA availability* on a continuous basis to meet forecast *power system load*;
    - (ii) an allocation of *generation* that cannot be *generated* continuously at the full offered *PASA availability* of the *scheduled generating units* for the period covered due to specified weekly *energy constraints*; and
    - (iii) the forecast *generation* of *semi-scheduled generating units* as provided by the *unconstrained intermittent generation forecasts*; and
  - (6) identification and quantification of:
    - (i) any projected *violations* of *power system security*;
    - (ii) any *days* on which *low reserve* or *lack of reserve* conditions are forecast to apply;
    - (iii) where a projected *supply* deficit in one *region* can be supplemented by a surplus in another *region* (dependent on forecast *interconnector* transfer capabilities);
    - (iv) forecast *interconnector* transfer capabilities and the discrepancy between forecast *interconnector* transfer capabilities and the forecast capacity of the relevant *interconnector* in the absence of *outages* on the relevant *interconnector* only; and
    - (v) when and where *network constraints* may become binding on the *dispatch* of *generation* or *load*.
  - (g) *NEMMCO* must document the procedure it uses for preparation of the *medium term PASA* and make it available to all *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* on a cost recovery basis.

**[3] Clause 3.7.3 Short term PASA**

Omit clauses 3.7.3(c) – (e) and substitute:

- (c) *NEMMCO* may *publish* additional updated versions of the *short term PASA* in the event of *changes* which, in the judgement of *NEMMCO*, are materially significant and should be communicated to *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants*.
- (d) The following *short term PASA inputs* are to be prepared by *NEMMCO*:
  - (1) forecast *load* which is to include:
    - (i) the most probable half hourly *profile* on the basis of past trends, day type and special events; and
    - (ii) all *scheduled load* and other *load* except for pumped storage loads,  
which must subsequently be adjusted in accordance with *dispatch offers* for *scheduled load*;
  - (2) *reserve* requirements for each *region* determined in accordance with the *short term capacity reserve standards*; and
  - (3) anticipated *inter-regional network constraints* and *intra-regional network constraints* known to *NEMMCO* at the time.
- (e) The following *short term PASA inputs* must be submitted by each relevant *Scheduled Generator* and *Market Participant* in accordance with the *timetable* and must represent the *Scheduled Generator's* or *Market Participant's* current intentions and best estimates:
  - (1) availability of each *scheduled generating unit, scheduled load* or *scheduled network service* for each *trading interval* under expected *market* conditions;
  - (2) *PASA availability* of each *scheduled generating unit, scheduled load* or *scheduled network service* for each *trading interval*;
  - (3) *scheduled generating unit synchronisation* and *de-synchronisation* times for *slow start generating units*; and
  - (4) projected daily *energy* availability for *energy constrained scheduled generating units* and *energy constrained scheduled loads*.

**[4] Clause 3.7.3**

Omit clause 3.7.3(h)(4) and substitute:

- (4) aggregate *generating unit* availability for each *region* calculated by adding the following categories:

- (i) the capacity of *scheduled generating units* that are able to operate at the full offered availability on a continuous basis to meet forecast *power system load*;
- (ii) an allocation of *generation* that cannot be *generated* continuously at the full offered availability of the *scheduled generating units* for the period covered due to specified *daily energy constraints*; and
- (iii) the forecast *generation* of *semi-scheduled generating units* as provided by the *unconstrained intermittent generation forecasts*.

**[5] Clause 3.7.3**

In clause 3.7.3(j), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[6] New rule 3.7B Unconstrained intermittent generation forecast**

After rule 3.7A, insert:

**3.7B Unconstrained intermittent generation forecast**

- (a) *NEMMCO* must prepare a forecast of the *available capacity* of each *semi-scheduled generating unit* (to be known as an *unconstrained intermittent generation forecast*) in accordance with this rule 3.7B for the purposes of:
  - (1) the *projected assessment of system adequacy process*;
  - (2) *dispatch*; and
  - (3) *pre-dispatch*.
- (b) A *Semi-Scheduled Generator* must submit to *NEMMCO*, in accordance with the *timetable*, the capacity of its *semi-scheduled generating unit* available to the electrical power conversion process to convert the input energy into electricity (**‘availability’**) for each *semi-scheduled generating unit* for the purpose of paragraph (a), where the availability of the unit is at least 30MW below the registered capacity of the unit provided as part of its *registered bid and offer data*.
- (c) When preparing an *unconstrained intermittent generation forecast* for the purposes referred to in paragraph (a), *NEMMCO* must take into account, where relevant:
  - (1) the total station registered capacity provided by the *Semi-Scheduled Generator* provided as part of its *registered bid and offer data*;

- (2) the availability of the *semi-scheduled generating unit* submitted by the *Semi-Scheduled Generator* under paragraph (b);
  - (3) the information obtained for the *semi-scheduled generating unit* from the *remote monitoring equipment* specified in clause S5.2.6.1;
  - (4) the forecasts of the energy available for input into the electrical power conversion process for each *semi-scheduled generating unit*;
  - (5) the assumption that there are no *network constraints* otherwise affecting the *generation* from that *semi-scheduled generating unit*; and
  - (6) the timeframes of:
    - (i) *pre-dispatch*;
    - (ii) *dispatch*,
    - (iii) *medium term PASA*; and
    - (iv) *short term PASA*.
- (d) *NEMMCO* must prepare the first *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* by 1 January 2009 and there must be an *unconstrained intermittent generation forecast* for each *semi-scheduled generating unit* available at all times after that date.

**[7] Clause 3.8.1 Central Dispatch**

In clause 3.8.1(a), after the words “*scheduled generating units*,” insert the words “*semi-scheduled generating units*,”.

**[8] Clause 3.8.1**

Omit clause 3.8.1(b)(2) and substitute:

- (2) *constraints*:
  - (i) due to availability and *commitment*; or
  - (ii) in the case of *semi-scheduling generating units*, identified by the *unconstrained intermittent generation forecast*;

**[9] Clause 3.8.1**

In clause 3.8.1(e), after the words “*scheduled generating unit*,” insert the words “*semi-scheduled generating unit*,”.

---

**[10] Clause 3.8.2 Participation in central dispatch**

Omit clause 3.8.2(a) and substitute:

- (a) A *Generator* must submit *generation dispatch offers* in respect of its *scheduled generating units* or *semi-scheduled generating units* (as the case may be) for each *trading day* in accordance with clause 3.8.6.

**[11] Clause 3.8.3 Bid and offer aggregation guidelines**

Omit clause 3.8.3 and substitute:

**3.8.3 Bid and offer aggregation guidelines**

- (a) *Scheduled Generators, Semi-Scheduled Generators* or *Market Participants* who wish to aggregate their relevant *generating units, scheduled network services* or *scheduled loads* for the purpose of *central dispatch* and *settlements* must apply to *NEMMCO* to do so.
- (b) *NEMMCO* must approve applications for aggregation made under paragraph (a) if the following conditions are fulfilled:
  - (1) aggregated *generating units* or *loads* must be *connected* at a single site with the same *intra-regional loss factor* and be operated by a single *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant*;
  - (2) aggregated *scheduled network services* must be *connected* at the same two sites, have the same *intra-regional loss factors*, have the same *distribution loss factors* where applicable and be operated by the same *Generator* or *Market Participant*; and
  - (3) *power system security* must not be materially affected by the proposed aggregation.
- (c) Notwithstanding that one or more of the conditions set out in paragraph (b) may not have been fulfilled by the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant*, *NEMMCO* may approve an application for aggregation provided that such aggregation would not materially distort *central dispatch*.
- (d) Subject to paragraph (f), for the purposes of Chapter 3 and rule 4.9, a reference to a *generating unit, scheduled load* and *scheduled network service* are to apply equally to aggregated *generating units, aggregated scheduled network services* and aggregated *scheduled loads* aggregated in accordance with this clause 3.8.3.
- (e) *NEMMCO* must evaluate applications for aggregation and reply within 20 *business days* of receipt of the application setting out whether the application is to be approved and the conditions that apply to the proposed approval.

- 
- (f) *Scheduled Generators, Semi-Scheduled Generators and Market Participants* that have been granted aggregated status must, if required by *NEMMCO*, declare individual *scheduled generating unit, semi-scheduled generating unit, scheduled network service* or *scheduled load* availability and operating status to *NEMMCO* in the *PASA* process under rule 3.7 to allow *power system security* to be effectively monitored.
  - (g) *NEMMCO* must provide a *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* with:
    - (1) reasons, if its application for aggregation is denied by *NEMMCO*;  
or
    - (2) notification, if its application for aggregation is approved.
  - (i) *NEMMCO* must maintain a database of aggregated *scheduled generating units, semi-scheduled generating units, scheduled network services* and *scheduled loads* and their components.
  - (j) For the avoidance of doubt, *semi-scheduled generating units* which are registered as a single *semi-scheduled generating unit* under clause 2.2.7 are not aggregated *semi-scheduled generating units* for the purposes of Chapter 3 and rule 4.9.

## **[12] Clause 3.8.6 Generating unit offers for dispatch**

Omit clause 3.8.6 and substitute:

### **3.8.6 Generating unit offers for dispatch**

#### **Scheduled Generator**

- (a) A *Scheduled Generator's dispatch offer* must:
  - (1) contain its intended *self-dispatch level* for each *trading interval*, and may contain up to 10 *price bands* which may be for:
    - (i) possible *dispatch* above the intended *self-dispatch level*; or
    - (ii) possible *off-loading* below the intended *self-dispatch level*, by *dispatch instruction*;
  - (2) specify for each of the 48 *trading intervals* in the *trading day*:
    - (i) a MW capacity for the intended *self-dispatch level*;
    - (ii) an incremental MW amount for each *price band* specified in the *dispatch offer*; and
    - (iii) a MW/min *ramp rate* capability;



- (3) where the offer specifies a *self-dispatch level* of more than zero, specify at least one *price band* for *off-loading* below the intended *self-dispatch level* and the total MW quantity in *price bands* specified for *off-loading* in each *trading interval* must equal the MW quantity of the *self-dispatch level* for that *trading interval* to enable possible *off-loading* to a zero *dispatch level*; and
  - (4) specify a *loading price* or an *off-loading price* for each *price band* specified in the *dispatch offer*, in dollars and whole cents per MWh, and this price is to apply to the *price band* throughout the *trading day*.
- (b) A *Scheduled Generator's dispatch offer* may specify the daily energy available for *energy constrained scheduled generating units*.
  - (c) A *Scheduled Generator's loading prices* offered must be equal to or greater than \$0/MWh and may not exceed the product of *VoLL* and the *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *scheduled generating unit*;
  - (d) A *loading price* of a *Scheduled Generator* specified for a *price band* is to be interpreted as the minimum price at which up to the specified MW increment is to be loaded in the *central dispatch* process;
  - (e) A *Scheduled Generator's off-loading prices* must be less than \$0/MWh, that is, negative in sign and may not be less than the product of the *market floor price* multiplied by the *intra-regional loss factor* at the *Scheduled Generator's transmission network connection point* for the *scheduled generating unit*.
  - (f) An *off-loading price* of a *Scheduled Generator* specified for a *price band* is to be interpreted as the maximum price payable to NEMMCO by the *Scheduled Generator* in respect of the *generating unit's sent out generation* with the *generating unit's* output reduced below its specified *self-dispatch level* in the *central dispatch* process by an amount less than the specified MW increment.

#### **Semi-Scheduled Generator**

- (g) A *Semi-Scheduled Generator's dispatch offer* may contain up to 10 *prices bands* and must specify for each of the 48 *trading intervals* in the *trading day*, an incremental MW amount for each *price band* specified in the *dispatch offer*.

#### **Scheduled and Semi-Scheduled Generators**

- (h) A *dispatch offer* of a *Semi-Scheduled Generator* or *Scheduled Generator* must meet the following requirements:
  - (1) the MW quantities specified are to apply at the terminals of the *scheduled generating unit* or *semi-scheduled generating unit* or,

---

with *NEMMCO's* agreement, at any other point in the relevant *Generator's* electrical installation or on the *network*;

- (2) prices specified for each *price band* specified in the *dispatch offer* must increase monotonically with an increase in available MWs;
- (3) prices specified are to apply at the *connection point* of the *scheduled generating unit* or the *semi-scheduled generating unit* (as the case may be) and for the purposes of *central dispatch* shall be referred to the *regional reference node* to which that *connection point* is assigned as follows:

$$RP = DOP \div LF$$

where

RP is the price specified in the *dispatch offer* when referred to the appropriate *regional reference node* and must not be greater than *VoLL* or less than the *market floor price*;

DOP is the price as specified in the *dispatch offer*; and

LF where the *connection point*:

- (i) is a *transmission network connection point*, is the *intra-regional loss factor* at that *connection point*; or
  - (ii) is a *distribution network connection point*, is the product of the *distribution loss factor* at that *connection point* multiplied by the *intra-regional loss factor* at the *transmission network connection point* to which it is assigned; and
- (4) the MW quantity specified in each *price band* in each *trading interval* must be specified in whole MW.

### **[13] Clause 3.8.8 Validation of dispatch bids and offers**

In clause 3.8.8, after the words “*Scheduled Generator*” wherever occurring, insert the words “, *Semi-Scheduled Generator*”.

### **[14] Clause 3.8.9 Default offers and bids**

Omit clause 3.8.9(a) and substitute:

- (a) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* may, at any time, submit a *dispatch offer*, a *dispatch bid* or a *market ancillary service offer* in respect of a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled load*, *scheduled network service*, *ancillary service generating unit* or *ancillary service load* to apply from a specified future *trading day*.

**[15] Clause 3.8.9**

In clauses 3.8.9(b), (d) and (e), after the words “*Scheduled Generator*” wherever occurring, insert the words “, *Semi-Scheduled Generator*”.

**[16] Clause 3.8.9**

In clause 3.8.9(d) after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[17] Clause 3.8.10 Network Constraints**

In clause 3.8.10(a), after the words “*scheduled generating units*”, insert the words “, *semi-scheduled generating units*”.

**[18] Clause 3.8.10**

In clause 3.8.10(c), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[19] Clause 3.8.14 Dispatch under conditions of supply scarcity**

In clauses 3.8.14(a) and (b), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[20] Clause 3.8.16 Equal priced dispatch bids and dispatch offers**

In clause 3.8.16, after the words “*scheduled generating units*”, insert the words “, *semi-scheduled generating units*”.

**[21] Clause 3.8.17 Self-commitment**

**3.8.17 Self-commitment**

Omit clauses 3.8.17(d) – (h) and substitute:

- (d) A *Scheduled Generator* or a *Semi-Scheduled Generator* has a right to synchronise its *scheduled generating unit* or *semi-scheduled generating unit* (as the case may be) to the *power system* and have *NEMMCO dispatch* that *generating unit* subject to the *dispatch* procedures set out in this rule 3.8.

- 
- (e) A *Scheduled Generator* must advise *NEMMCO* of its intention to *self-commit* and *synchronise* a *scheduled generating unit* with a *nameplate rating* of 30MW or more.
  - (f) Unless otherwise agreed with *NEMMCO*, the *Scheduled Generator* must advise of its intention under paragraph (e) through *PASA* and *pre-dispatch* by submitting an amended *available capacity* profile of the *scheduled generating unit* into the *market information bulletin board*.
  - (g) The exact time of *synchronisation* for a *scheduled generating unit* will be subject to directions from *NEMMCO* in accordance with Chapter 4.
  - (h) A *Scheduled Generator* or *Market Participant* must notify *NEMMCO* of any changes to *self-commitment* decisions without delay.
  - (i) *NEMMCO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *self-commitment* decisions without delay.

**[22] Clause 3.8.18 Self-decommitment**

Omit clauses 3.8.18(c) and (d) and substitute:

- (c) A *Scheduled Generator* must advise *NEMMCO* of its intention to *self-decommit* and *de-synchronise* a *generating unit* (other than *slow starting generating units*) with a *nameplate rating* of 30 MW or more.
- (d) Unless otherwise agreed with *NEMMCO*, the *Scheduled Generator* must advise of its intention under paragraph (c) through *PASA* and *pre-dispatch* by submitting an amended *available capacity* profile of the *scheduled generating unit* into the *market information bulletin board*.
- (e) A *Scheduled Generator* or *Market Participant* must notify *NEMMCO* as soon as practicable of any changes in their *self-decommitment* decisions.
- (f) *NEMMCO* must notify all *Scheduled Generators* and *Market Participants* of any changes to *self-decommitment* decisions as soon as practicable.

**[23] Clause 3.8.20 Pre-dispatch schedule**

Omit clause 3.8.20(c) and substitute:

- (c) *NEMMCO* must determine the *pre-dispatch schedule* for each *trading interval* on the basis of:
  - (1) *dispatch bids*, *dispatch offers* and *market ancillary service offers* submitted for that *trading interval*;

- 
- (2) *NEMMCO's forecast power system load for each region for that trading interval; and*
  - (3) *the unconstrained intermittent generation forecasts,*
- and by using a process consistent with the principles for *central dispatch* as set out in clause 3.8.1.

**[24] Clause 3.8.20 Pre-dispatch schedule**

Omit clauses 3.8.20(i) – (k) and substitute:

- (i) *NEMMCO* must fully document the operation of the *pre-dispatch* process, including the principles adopted in making calculations required to be included and all such documentation must be made available to *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* at a fee to be set by *NEMMCO* to cover its costs of supplying such documentation.
- (j) The following *pre-dispatch* outputs relating specifically to a *generating unit, scheduled network service, scheduled load or ancillary service load* operated by a *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* (as the case may be) must be made available electronically to the relevant *Generator* or *Market Participant* on a confidential basis:
  - (1) the scheduled times of *commitment* and *de-commitment* of individual *slow start generating units*;
  - (2) scheduled half hourly *loading* for each scheduled entity;
  - (3) scheduled provision of *ancillary services*;
  - (4) scheduled *constraints* for the provision of *ancillary services*;
  - (5) scheduled *constraints* due to *network* limitations;
  - (6) *unconstrained intermittent generation forecasts* for each *trading interval*; and
  - (7) for each *semi-scheduled generating unit* and *trading interval*, whether or not a condition for setting a *semi-dispatch interval* applies.
- (k) Where the *pre-dispatch schedule* may have failed to maximise the joint value of *energy* and *ancillary services pre-dispatch* outputs of a *scheduled generating unit* or *semi-scheduled generating unit*, due to the *generating unit* operating outside its *enablement limit*, *NEMMCO* must notify the *Scheduled Generator* or *Semi-Scheduled Generator* operating the relevant *generating unit*, electronically on a confidential basis.

**[25] Clause 3.8.21 On-line dispatch process**

Omit clauses 3.8.21(d) – (m) and substitute:

- (d) Where possible, *dispatch instructions* will be issued electronically via the *automatic generation control system* or via an electronic display in the *plant control room* (which may be onsite or offsite) of the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* (as the case may be).
- (e) *NEMMCO* may issue *dispatch instructions* in some other form if in its reasonable opinion the methods described in paragraph (d) are not possible.
- (f) A *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* must ensure it has facilities to receive *dispatch instructions* in the manner described in this clause 3.8.21.
- (g) *Dispatch instructions* that are issued via the *automatic generation control system* are to be issued progressively at intervals of no more than 5 minutes following re-evaluation of *central dispatch* to achieve a prompt and smooth implementation of the outcomes of each *central dispatch* update.
- (h) With the exception of instructions issued by telephone, all *dispatch instructions* and the times at which they are issued are to be logged automatically and *dispatch instructions* that are issued by telephone must be recorded by *NEMMCO*.
- (i) *NEMMCO* may modify or override the *dispatch algorithm* outcome in accordance with the requirements of clause 4.8.9 or due to *plant* not conforming to *dispatch instructions* and in such circumstances *NEMMCO* must record the details of the event and the reasons for its action for audit purposes.
- (j) If a *scheduled load* or *scheduled generating unit*, in respect of which a *dispatch inflexibility profile* has been notified to *NEMMCO* in accordance with clause 3.8.19, is *dispatched* from 0 MW in any *dispatch interval* by the *central dispatch* process, then the specified *dispatch inflexibility profile* must be used by *NEMMCO* as a *constraint* on the *dispatch* of that *plant* for the relevant subsequent *dispatch intervals*.
- (k) A *scheduled load* or *scheduled generating unit* whose *dispatch* is *constrained* in any *dispatch interval* due to a *dispatch inflexibility profile* submitted under clause 3.8.19 cannot be used as the basis for setting the *dispatch price* in that *dispatch interval* at any location.

- (l) *NEMMCO* must fully document the operation of the process described in this clause 3.8.21, including the software, algorithms, and the principles adopted in making judgments where they are required in the process and all such documentation must be made available to *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* at a price reflective of costs incurred by *NEMMCO* in providing such documentation.
- (m) Where the *central dispatch* process may have failed to *dispatch* a *scheduled generating unit* or *semi-scheduled generating unit* to maximise the joint value of *energy* and *ancillary services* due to the relevant *generating unit* operating outside its *enablement limit*, *NEMMCO* must notify the *Scheduled Generator* or *Semi-Scheduled Generator* operating the relevant *generating unit* on a confidential basis.

## **[26] Clause 3.8.22 Rebidding**

Omit clauses 3.8.22(b) – (d) and substitute:

- (b) Subject to paragraph (c) and clause 3.8.22A:
  - (1) a *Scheduled Generator* or *Market Participant* may vary:
    - (i) its *available capacity*, *daily energy constraints*, *dispatch inflexibilities* and *ramp rates* of *scheduled generating units*, *scheduled network services* and *scheduled loads*; and
    - (ii) the *response breakpoints*, *enablement limits* and response limits of *market ancillary services*; and
  - (2) a *Semi-Scheduled Generator* may vary its *available capacity*.
- (c) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must provide:
  - (1) all *rebids* to *NEMMCO* electronically unless otherwise approved by *NEMMCO*;
  - (2) to *NEMMCO*, at the same time as the *rebid* is made:
    - (i) a brief, verifiable and specific reason for the *rebid*; and
    - (ii) the time at which the event(s) or other occurrence(s) adduced by the relevant *Generator* or *Market Participant* as the reason for the *rebid*, occurred;
  - (3) to the *AER*, upon written request, in accordance with guidelines published by the *AER* from time to time under this clause 3.8.22 and in accordance with the *Rules consultation procedures*, such

additional information to substantiate and verify the reason for a *rebid* as the *AER* may require from time to time.

- (d) The *AER* must provide information provided to it in accordance with paragraph (c)(3) to any *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* that requests such information, except to the extent that the information can be reasonably claimed to be *confidential information*.
- (e) The guidelines developed by the *AER* under paragraph (c)(3) must include:
  - (1) the amount of detail to be included in the information provided to *NEMMCO* under paragraph (c)(2); and
  - (2) procedures for handling claims by *Scheduled Generators*, *Semi-Scheduled Generators* or *Market Participants* in accordance with paragraph (d) or clause 3.8.19(b)(2) that the information provided to the *AER* by such *Generators* or *Market Participants* under those clauses is *confidential information*.
- (f) The *AER* must *publish* the guidelines developed under this clause 3.8.22 and may amend such guidelines from time to time.
- (g) *NEMMCO* must:
  - (1) subject to the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* complying with paragraphs (c)(1) and (c)(2)(i) and (ii), accept the *rebid*; and
  - (2) *publish*, in accordance with clause 3.13.4(p), the time the *rebid* was made and the reason provided by the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* under paragraph (c)(2)(i).

**[27] Clause 3.8.22A      Variation of offer, bid or rebid**

Omit clause 3.8.22A and substitute:

**3.8.22A      Variation of offer, bid or rebid**

- (a) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must make a *dispatch offer*, *dispatch bid* or *rebid* in good faith.
- (b) In paragraph (a) a *dispatch offer*, *dispatch bid* or *rebid* is taken to be made in good faith if, at the time of making such an offer, bid or *rebid*, a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* has a genuine intention to honour that offer, bid or *rebid*, if



the material conditions and circumstances upon which the offer, bid or *rebid* were based remain unchanged until the relevant *dispatch interval*.

- (c) A *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* may be taken to have contravened paragraph (a) notwithstanding that, after all the evidence has been considered, the intention of the relevant *Generator* or *Market Participant* is ascertainable only by inference from:
  - (1) the conduct of the relevant *Generator* or *Market Participant*;
  - (2) the conduct of any other person; or
  - (3) the relevant circumstances.

### **[28] Clause 3.8.23 Failure to conform to dispatch instructions**

Omit clause 3.8.23 and substitute:

#### **3.8.23 Failure to conform to dispatch instructions**

- (a) If a *scheduled generating unit*, *scheduled network service* or *scheduled load* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *NEMMCO's* reasonable opinion), then the *scheduled generating unit*, *scheduled network service* or *scheduled load* (as the case may be):
  - (1) is to be declared and identified as non-conforming; and
  - (2) cannot be used as the basis for setting *spot prices*.
- (b) If a *semi-scheduled generating unit* fails to respond to a *dispatch instruction* within a tolerable time and accuracy (as determined in *NEMMCO's* reasonable opinion) in a *semi-dispatch interval* where the unit's actual *generation* is more than the *dispatch cap*, the unit is to be declared and identified as non-conforming and cannot be used as the basis for setting *spot prices*.
- (c) If a *scheduled generating unit*, *semi-scheduled generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming under paragraphs (a) or (b):
  - (1) *NEMMCO* must advise the *Scheduled Generator*, *Semi-Scheduled Generator*, *Scheduled Network Service Provider* or *Market Customer* that the relevant *generating unit*, *scheduled network service* or *scheduled load* is identified as non-conforming, and request and log a reason for the non-compliance with the *dispatch instruction*; and
  - (2) if in *NEMMCO's* opinion modification of *plant* parameters is necessary or desirable, *NEMMCO* must request the *Scheduled*

*Generator, Semi-Scheduled Generator, Scheduled Network Service Provider or Market Customer to submit modified plant parameters to satisfy NEMMCO that a realistic real time dispatch schedule can be carried out; and*

- (3) should a *Scheduled Generator or Semi-Scheduled Generator* fail to meet the requests set out subparagraphs (1) and (2) or if *NEMMCO* is not satisfied that the *generating unit* will respond to future *dispatch instructions* as required, *NEMMCO* must direct the *generating unit's* output to follow, as far as is practicable, a specified output profile to be determined at its discretion by *NEMMCO*;
  - (4) should a *Scheduled Network Service Provider* fail to meet the requests set out in subparagraphs (1) and (2) or if *NEMMCO* is not satisfied that the *scheduled network service* will respond to future *dispatch instructions* as required, *NEMMCO* must direct the *scheduled network service* to follow, as far as is practicable, a specified transfer profile to be determined at its discretion by *NEMMCO*; or
  - (5) should a *Market Customer* not meet the requests set out in subparagraphs (1) and (2) within a reasonable time of the request, or if *NEMMCO* is not satisfied that the *scheduled load* will respond to future *dispatch instructions* as required, *NEMMCO* acting reasonably may invoke a *default dispatch bid* lodged by the relevant *Market Customer* or apply *constraints* as it deems appropriate.
- (d) Until a *Scheduled Generator, Semi-Scheduled Generator, Scheduled Network Service Provider or Market Customer* satisfactorily responds to the requests under paragraphs (c)(1) and (2) and *NEMMCO* is satisfied that the *generating unit, scheduled network service or scheduled load* (as the case may be) will respond to future *dispatch instructions* as required, the *generating unit, scheduled network service or scheduled load* (as the case may be) continues to be non-conforming.
  - (e) If a *generating unit, scheduled network service or scheduled load* (as the case may be) continues to be non-conforming under this clause 3.8.23 after a reasonable period of time, *NEMMCO* must prepare a report setting out the details of the non-conformance and forward a copy of the report to the *Scheduled Generator, Semi-Scheduled Generator, Scheduled Network Service Provider or Market Customer* (as the case may be) and the *AER*.
  - (f) The direction referred to in paragraphs (c)(3) and (4) must remain in place until the *Scheduled Generator, Semi-Scheduled Generator or Scheduled Network Service Provider* (whichever is relevant) satisfies *NEMMCO* of rectification of the cause of the non-conformance.

- (g) If an *ancillary service generating unit* or *ancillary service load* is *enabled* to provide a *market ancillary service* and fails to respond in the manner contemplated by the *market ancillary service specification* (as determined in *NEMMCO's* reasonable opinion), then:
  - (1) the *ancillary service generating unit* or *ancillary service load* is to be declared and identified as non-conforming;
  - (2) *NEMMCO* must advise the relevant *Market Participant* that the *ancillary service generating unit* or *ancillary service load* is identified as non-conforming, and request a reason for the non-conformance. The relevant *Market Participant* must promptly provide a reason if requested to do so, and the reason is to be logged; and
  - (3) *NEMMCO* may set a fixed level for the relevant *ancillary service* (in this clause 3.8.23 called the '**fixed constraint**') for the *ancillary service generating unit* or *ancillary service load* and the relevant *Market Participant* must ensure that the *ancillary service generating unit* or *ancillary service load* complies with the fixed constraint set by *NEMMCO*.
- (h) *NEMMCO* must lift the fixed constraint in respect of an *ancillary service generating unit* or *ancillary service load* when *NEMMCO* is reasonably satisfied (as a result of a test or otherwise) that the *ancillary service generating unit* or *ancillary service load* is capable of responding in the manner contemplated by the *market ancillary service specification*.
- (i) In assessing a report of non-conformance with a *dispatch instruction* by a *scheduled load*, the *AER* shall have regard to whether a *default dispatch bid* had been lodged with *NEMMCO* and was, or could have reasonably been, applied in the circumstances applicable to that *scheduled load*.

**[29] Clause 3.9.1 Principles applicable to spot price determination**

In clause 3.9.1, omit the words "clause 3.8.23(f)" and substitute the words "clause 3.8.23(g)".

**[30] Clause 3.12A.6 Pricing during a restriction price trading interval**

In clause 3.12A.6, omit the words "clause 3.8.6(h)" and substitute the words "clause 3.8.6(d)".

**[31] Clause 3.13.1 Provision of information**

In clause 3.13.1(a), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[32] Clause 3.13.2 Systems and procedures**

Omit clause 3.13.2 and substitute:

**3.13.2 Systems and procedures**

- (a) Information must be provided to *NEMMCO* and by *NEMMCO* on the *electronic communication system* unless:
  - (1) the *electronic communication system* is partially or wholly unavailable, then information will, to the extent of that unavailability, be provided to *NEMMCO* and by *NEMMCO* by means of the backup procedures specified by *NEMMCO* from time to time; or
  - (2) otherwise approved by *NEMMCO*.
- (b) Information must be provided by using the templates supplied in the *electronic communication system* unless otherwise approved by *NEMMCO*.
- (c) Where approved by *NEMMCO*, information may be transmitted to and from *NEMMCO* and the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* concerned in any agreed format.
- (d) If possible, information provided to *NEMMCO* must be *time stamped* by *NEMMCO* on receipt by *NEMMCO* of the information by the *electronic communication system* and, if stamped, is deemed to be provided at the time indicated by the *time stamp*.
- (e) Information that is *published* by *NEMMCO* is deemed to be *published* when the information is placed on the *market information bulletin board*.
- (f) The *market information bulletin board* must be accessible by *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants* via the *electronic communication system* subject to applicable security requirements.
- (g) Information *published* or notified to a *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* must be capable of being reviewed by that *Generator* or *Market Participant* and be capable of being downloaded from the *market information bulletin board* to the relevant *Generator* or *Market Participant* via the *electronic communication system*.

- 
- (h) A *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* must notify *NEMMCO* of, and *NEMMCO* must *publish*, any *changes* to submitted information within the times prescribed in the *timetable*.
  - (i) *NEMMCO* must make a copy of all *changes* to the data available to *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* for verification and resubmission by the relevant *Generator* or *Market Participant* as necessary.
  - (j) All revisions must be provided on the *electronic communication system* and in the same format as the original information.
  - (k) A *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* may withhold information from *NEMMCO* which must otherwise be provided under the *Rules* if:
    - (1) the information is of a confidential or commercially-sensitive nature and is not information of a kind that, in the reasonable opinion of the *AEMC*, is fundamental to the efficient operation of the *market*; or
    - (2) disclosure of the information would have the likely effect of causing detriment to the person required to provide it unless, in the reasonable opinion of the *AEMC*, the public benefit resulting from the provision of the information outweighs that detriment.
  - (l) Nothing in paragraph (k) allows a *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* to avoid providing information to *NEMMCO* under the *Rules* where that information is generally available.

**[33] Clause 3.13.3 Standing data**

In clauses 3.13.3(a), (b), (c), (d), (h), (j) and (q)(5), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[34] Clause 3.13.3**

In clauses 3.13.3(a), (j) and (t), after the words “*Scheduled Generator*”, insert the words “, *Semi-Scheduled Generator*”.

**[35] Clause 3.13.4 Spot market**

Omit clauses 3.13.4(o) – (q) and substitute:

- (o) Within 2 *business days* of an event whereby a *scheduled generating unit* or *semi-scheduled generating unit* has been *constrained off* or in the case of a *scheduled generating unit, constrained on*, in the *central*

*dispatch* by a *network constraint* within its own *region*, NEMMCO must advise the *Scheduled Generator* or *Semi-Scheduled Generator* and *Network Service Provider*, with whom the relevant *Generator* has a *connection agreement* in respect of that *generating unit*, of the following information:

- (1) the *dispatch intervals* in which the *constraint* applied; and
  - (2) NEMMCO's reasonable estimate of the MW quantities at which the *generating unit* would otherwise have been *dispatched* in each relevant *trading interval* in accordance with its *dispatch offer* and in the absence of the *network constraint*.
- (p) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of final *dispatch offers*, *dispatch bids* and *market ancillary service offers* received and actual availabilities of *generating units*, *scheduled network services*, *scheduled loads* and *market ancillary services* for the previous *trading day*, including:
- (1) the number and times at which *rebids* were made, and the reason provided by the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* for each *rebid* under clause 3.8.22(c)(2).
  - (2) identification of the *Scheduled Generator*, *Semi-Scheduled Generator* or *Market Participant* submitting the *dispatch bid*, *dispatch offer* or *market ancillary offer*;
  - (3) the *dispatch bid* or *dispatch offer prices*;
  - (4) quantities for each *trading interval*;
  - (5) the *ramp rate* of each *scheduled generating unit*, *scheduled load* and *scheduled network service* as measured by NEMMCO's telemetry system;
  - (6) identification of *trading intervals* for which the *plant* was specified as being *inflexible* in accordance with clause 3.8.19 and the reasons provided by the *Scheduled Generator* or *Market Participant* in accordance with clause 3.8.19(b)(1);
  - (7) in respect of a *semi-scheduled generating unit*, the availability of that *generating unit* specified in the relevant *unconstrained intermittent generation forecast* for each *dispatch interval*; and
  - (8) in respect of *semi-scheduled generating units*, the aggregate of the availability of the *semi-scheduled generating units* referred to subparagraph (7) in respect of each *region* for each *dispatch interval*.
- (q) Each *day*, in accordance with the *timetable*, NEMMCO must *publish* details of:
- (1) actual *generation*, *dispatched generation*, *dispatched network service* or *dispatched load* for each *scheduled generating unit*,

---

*semi-scheduled generating unit, scheduled network service and scheduled load* respectively in each *trading interval* and *dispatch interval*; and

- (2) for each *semi-scheduled generating unit* and *trading interval*, whether or not a condition for setting a *semi-dispatch interval* applied,

for the previous *trading day*.

**[36] Clause 3.13.4 Spot market**

After clause 3.13.4(x) insert:

- (y) In accordance with the *timetable* and no more than 3 hours after the last such notification, *NEMMCO* must notify electronically on a confidential basis each *Semi-Scheduled Generator* of the *unconstrained intermittent generation forecast* for its *semi-scheduled generating units* that was taken into account for *trading interval* of the last *pre-dispatch schedule published* by *NEMMCO* under paragraph (e).

**[37] Clause 3.13.7 Monitoring of significant variation between forecast and actual prices**

In clause 3.13.7(d)(3), after the words “*scheduled generating units*” wherever occurring, insert the words “and *semi-scheduled generating units*”.

**[38] Clause 3.15.6A Ancillary service transactions**

In clause 3.15.6A(k)(4), omit the word “and”.

[Drafting Note: Drafting Instruction No.45 and No.46, take into account the commencement of the *National Electricity Amendment (Cost Recovery of Localised Regulation Services) Rule 2007 No.5*]

**[39] Clause 3.15.6A**

After clause 3.15.6A(k)(5), insert:

; and

- (6) a *Semi-Scheduled Generator* will not be assessed as contributing to the deviation in the *frequency* of the *power system* if within a *dispatch interval*, the *semi-scheduled generating unit*:
- (i) holds or changes its actual *generation* at a uniform rate over a *dispatch interval*;

- 
- (ii) is *enabled* to provide a *market ancillary service* and responds to a control signal from *NEMMCO* to *NEMMCO*'s satisfaction; or
  - (iii) is not *enabled* to provide a *market ancillary service*, but responds to a need for *regulation services* in a way that tends to reduce the aggregate deviation.

**[40] Clause 3.15.7 Payment to Directed Participants**

In clause 3.15.7(c), after the words "*Scheduled Generators*," insert the words "*Semi-Scheduled Generators*,".

**[41] Clause 3.15.7A Payment to Directed Participants for services other than energy and market ancillary services**

In clause 3.15.7A(c)(1)(ii), after the words "*Scheduled Generators*," insert the words "*Semi-Scheduled Generators*,".

**[42] Clause 3.15.7B Claim for additional compensation by Directed Participants**

In clause 3.15.7B(a)(1), after the words "*scheduled generating unit*", insert the words "*, semi-scheduled generating unit*".

**[43] Clause 3.15.7B**

Omit clause 3.15.7B(a3) and substitute:

- (a3) For the purposes of the calculation of additional net direct costs pursuant to paragraphs (a)(1) and (a1)(1), the additional net direct costs incurred by the *Directed Participant* in respect of that *scheduled generating unit, semi-scheduled generating unit* or *scheduled network services* (as the case may be) includes without limitation:
  - (1) fuel costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (2) incremental maintenance costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (3) incremental manning costs in connection with the relevant *generating unit* or *scheduled network services*;
  - (4) acceleration costs of maintenance work in connection with the relevant *generating unit* or *scheduled network services*, where such acceleration costs are incurred to enable the *generating unit* or *scheduled network services* to comply with the *direction*;
  - (5) delay costs for maintenance work in connection with the relevant *generating unit* or *scheduled network service*, where such delay



costs are incurred to enable the *generating unit* or *scheduled network service* to comply with the *direction*;

- (6) other costs incurred in connection with the relevant *generating unit* or *scheduled network services*, where such costs are incurred to enable the *generating unit* or *scheduled network service* to comply with the *direction*; and
- (7) any compensation which the *Directed Participant* receives or could have obtained by taking reasonable steps in connection with the relevant *generating unit* or *scheduled network services* being available.

**[44] Clause 3.16.1 Establishment of Participant compensation fund**

In clause 3.16.1(a), after the words “*Scheduled Generators*”, insert the words “, *Semi-Scheduled Generators*”.

**[45] Clause 3.16.1**

Omit clause 3.16.1(g) and substitute:

- (g) Upon ceasing to be a *Scheduled Generator* or a *Semi-Scheduled Generator*, the relevant *Generator* is not entitled to a refund of any contributions made to the *Participant compensation fund*.

**[46] Clause 3.16.2 Dispute resolution panel to determine compensation**

Omit clause 3.16.2(d) and substitute:

- (d) A *Scheduled Generator* or *Semi-Scheduled Generator* who receives an instruction in respect of a *scheduled generating unit* or *semi-scheduled generating unit* (as the case may be) to operate at a lower level than the level at which it would have been instructed to operate had the *scheduling error* not occurred, will be entitled to receive in compensation an amount determined by the *dispute resolution panel*.

**[47] Clause 3.16.2**

Omit clause 3.16.2(f) and substitute:

- (f) A *Scheduled Generator* or *Semi-Scheduled Generator* who receives a *dispatch instruction* in respect of a *generating unit* to operate at a level consistent with a *dispatch offer price* (with reference to the relevant *regional reference node*) which is higher than the *dispatch price*, due to the operation of clause 3.9.2B, is entitled to receive in compensation an amount determined by the *dispute resolution panel*.

**[48] Clause 3.16.2**

In clause 3.16.2(h)(1), after the words “*scheduled generating unit*” insert the words “or *semi-scheduled generating unit*”.

**[49] Schedule 3.1 – Registered Bid and Offer Data**

Omit schedule 3.1 and substitute:

**Schedule 3.1 - Registered Bid and Offer Data**

- (a) The *registered bid and offer data* are the standard data requirements for verification and compilation of *dispatch bids* and *dispatch offers* on the *trading day* schedule.
- (b) *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* must notify NEMMCO of their *registered bid and offer data* in accordance with this schedule 3.1 in respect of each of their *scheduled loads, semi-scheduled generating units* and *scheduled generating units* at least six weeks prior to commencing participation in the *market*.
- (c) *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* must review their *registered bid and offer data* annually in accordance with the *timetable* advised by NEMMCO and provide details of any *changes* to NEMMCO.
- (d) *Registered bid and offer data* may be updated by a *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* at any time but may be subject to audit at NEMMCO’s request.
- (e) A copy of all *changes* to the data must be returned to each *Scheduled Generator, Semi-Scheduled Generator* and *Market Participant* for verification and resubmission by the *Scheduled Generator, Semi-Scheduled Generator* or *Market Participant* as necessary.
- (f) *Registered bid and offer data* may include tolerance levels.

**Scheduled Generating Unit Data:**

Data	Units of Measurement
<b><i>Power station information:</i></b>	
node number/identifier	
total station registered capacity	MW
total station <i>sent out generation</i> at registered capacity	MW

daily <i>energy constraint</i> , if applicable	MWh per day
<b>Generating unit information:</b>	
full <i>load</i>	MW ( <i>generated and sent out</i> )
normal or technical minimum <i>load</i>	MW ( <i>generated and sent out</i> )
additional emergency <i>generation</i> above registered capacity	MW
normal and maximum <i>ramp rates</i>	MW/minute
response time to full <i>load</i> from cold standby	minutes
aggregation data	
capability chart	
notice to <i>synchronise</i>	minutes
minimum shutdown time	minutes
maximum shutdowns per day	

**Semi-Scheduled Generating Unit Data:**

Data	Units of Measurement
<b>Power station information:</b>	
node number/identifier	
total station registered capacity	MW

**Scheduled Load Data:**

Data	Units of Measurement
node number/identifier	
<i>normally on or normally off</i>	
<i>maximum load</i>	MW
daily <i>energy constraint</i> if applicable	MWh per day
normal and maximum <i>ramp rates</i>	MW/min
aggregation data	

---

**Scheduled Network Service Data:**

Data	Units of Measurement
node number/identifier for <i>connection points A and B</i>	
Registered <i>power transfer capability</i> to node 1 (may be seasonal etc)	MW
Registered <i>power transfer capability</i> to node 2 (may be seasonal etc).	MW
Additional transient <i>power transfer capability</i> in each direction	MW
Normal and maximum transfer <i>ramp rates</i> (if applicable)	MW/min
Loss vs flow as piecewise linear relationships for each direction which, taken together, are convex over the entire range of <i>power transfer capabilities</i> in both directions	
Aggregation data	

**Dispatch Inflexibility Profile**

Data	Units of Measurement
Time for response from receipt of <i>dispatch</i> instruction from zero <i>load</i> , T1 (see clause 3.8.19(e)(1))	minutes
Time after T1 required to reach minimum loading level (see clause 3.8.19(e)(2))	minutes
Time after T2 for which <i>plant</i> must operate at or above the minimum <i>loading level</i> (see clause 3.8.19(e)(3))	minutes
Time required by <i>plant</i> to reduce from its minimum <i>loading level</i> to zero (see clause 3.8.19(e)(4))	minutes
minimum <i>loading level</i> (see clauses 3.8.19(e)(2),(3),(4))	MW

## **Aggregation Data**

Where *dispatch bids* or *dispatch offers* are submitted for aggregated *generating units*, *market network services* or *loads* then, unless otherwise exempted by *NEMMCO*, each *Scheduled Generator*, *Semi-Scheduled Generator* and *Market Participant* must provide the information required in accordance with this schedule 3.1 for each *generating unit*, *market network service* or *load* included in those *dispatch bids* or *dispatch offers* both separately and in aggregated form.

### **[50] Clause 4.1.1 Purpose**

In clause 4.1.1(a)(3)(iv), after the words “*scheduled generating units*,”, insert the words “*semi-scheduled generating units*”.

### **[51] Clause 4.3.1 Responsibility of NEMMCO for power system security**

In clause 4.3.1(i), after the words “*scheduled generating units*,”, insert the words “*semi-scheduled generating units*,”.

### **[52] Clause 4.4.2 Operational frequency control requirements**

Omit clause 4.4.2 and substitute:

#### **4.4.2 Operational frequency control requirements**

To assist in the effective control of *power system frequency* by *NEMMCO* the following provisions apply:

- (a) *NEMMCO* may give *dispatch instructions* in respect of *scheduled generating units*, *semi-scheduled generating units*, *scheduled loads*, *scheduled network services* and *market ancillary services* pursuant to rule 4.9.
- (b) Each *Generator* must ensure that all of its *generating units* meet the technical requirements for frequency control in clause S5.2.5.11.
- (c) *NEMMCO* must use its reasonable endeavours to arrange to be available and specifically allocated to *regulating duty* such *generating plant* as *NEMMCO* considers appropriate which can be automatically controlled or directed by *NEMMCO* to ensure that all normal *load* variations do not result in *frequency* deviations outside the limitations specified in clause 4.2.2(a).
- (d) *NEMMCO* must use its reasonable endeavours to ensure that adequate *facilities* are available and are under the direction of *NEMMCO* to allow the managed recovery of the *satisfactory operating state* of the *power system*.

**[53] Clause 4.8.5 Managing declarations of conditions**

In clause 4.8.5(c)(2), after the words “*Market Customers*”, insert the words “*Semi-Scheduled Generators*”.

**[54] Clause 4.8.5A Determination of the latest time for intervention by direction or dispatch of reserve contract**

In clauses 4.8.5A(c) and (d), after the words “*Scheduled Generator*” wherever occurring and insert the words “, *Semi-Scheduled Generator*”.

**[55] Clause 4.8.5A**

In clause 4.8.5A(f), after the words “*Scheduled Generator*”, insert the words “or *Semi-Scheduled Generator*”.

**[56] Clause 4.9.2 Dispatch Instructions to Scheduled Generators**

Omit clause 4.9.2 and substitute:

**4.9.2 Instructions to Scheduled Generators and Semi-Scheduled Generators**

- (a) To implement *central dispatch* or, where *NEMMCO* has the power to direct or to instruct a *Scheduled Generator* or *Semi-Scheduled Generator* either under Chapter 3 or this Chapter, then for the purpose of giving effect to that direction or instruction, *NEMMCO* may at any time give an instruction to the *Generator* in relation to any of its *generating units* (a *dispatch instruction*), in accordance with clause 4.9.5(b), nominating:
  - (1) whether the facilities for *generation* remote control by *NEMMCO*, if available, must be in service;
  - (2) in the case of a *scheduled generating unit*, the level or schedule of power to be supplied by the *generating unit* over the specified period; and
  - (3) in the case of a *semi-scheduled generating unit*, the maximum level of power to be supplied by the *generating unit* over the specified period.
- (b) Subject to paragraph (c), *NEMMCO* may at any time give an instruction to a *Scheduled Generator* in relation to any of its *scheduled generating units* with a *nameplate rating* of 30MW or more, or its *scheduled generating systems* of combined *nameplate rating* of 30 MW or more, nominating that:

- 
- (1) the *generating unit* or *generating system* transformer is to be set to a nominated tap position (if it has on-load tap changing capability);
  - (2) the *generating unit's* or *generating system's voltage control system* set-point is to be set to give a nominated *voltage*; or
  - (3) the *generating unit* or *generating system* is to be operated to supply or absorb a nominated level of *reactive power* at its *connection point*.
- (c) Unless otherwise provided under an *ancillary services agreement* or a *connection agreement*, *NEMMCO* must not give an instruction under paragraph (b) that requires a *generating unit* or *generating system* to supply or absorb *reactive power* at a level outside the *plant's* relevant *performance standard*.
  - (d) A *Scheduled Generator* or *Semi-Scheduled Generator* must with respect to its *generating units* that have an availability offer of greater than 0 MW (whether *synchronised* or not), ensure that appropriate personnel are available at all times to receive and immediately act upon *dispatch instructions* issued by *NEMMCO* to the relevant *Generator*.

**[57] Clause 4.9.2A Dispatch Instructions to Scheduled Network Service Providers**

Omit clause 4.9.2A and substitute:

**4.9.2A Dispatch Instructions to Scheduled Network Service Providers**

- (a) Where *NEMMCO* has the power to direct or to instruct a *Scheduled Network Service Provider* either under Chapter 3 or this Chapter then, for the purpose of giving effect to that direction or instruction, *NEMMCO* may at any time give an instruction to a *Scheduled Network Service Provider* in relation to any of its *scheduled network services* (a "*dispatch instruction*"), in accordance with clause 4.9.5(b), nominating:
  - (1) whether the facilities for remote control by *NEMMCO*, if available, must be in service; and
  - (2) the level or schedule of power to be transferred by the *scheduled network service* over the specified period.
- (b) A *Scheduled Network Service Provider* must, with respect to its *scheduled network services* that have an availability offer of greater than 0 MW, ensure that appropriate personnel are available at all times to receive and immediately act upon *dispatch instructions* issued to the *Scheduled Network Service Provider* by *NEMMCO*.

**[58] Clause 4.9.3 Instructions to Registered Participants**

Omit clause 4.9.3 and substitute:

**4.9.3 Instructions to Registered Participants**

- (a) *NEMMCO* may, at any time, give instructions to *Registered Participants* to reduce their *load* for electricity consistent with *dispatch bids* made in accordance with Chapter 3 ("*dispatch instructions*").
- (b) A *Market Customer* must, with respect to *scheduled loads* in relation to which a *dispatch bid* has been submitted for a particular *trading interval*, ensure that appropriate personnel or electronic facilities are available at all times to receive and immediately act upon *dispatch instructions* issued to the *Market Customer* by *NEMMCO*.

**[59] Clause 4.9.4 Dispatch related limitations on Scheduled Generators**

Omit clause 4.9.4 and substitute:

**4.9.4 Dispatch related limitations on Scheduled Generators and Semi-Scheduled Generators**

A *Scheduled Generator* or *Semi-Scheduled Generator* (as the case may be) must not, unless in the *Generator's* reasonable opinion, public safety would otherwise be threatened or there would be a material risk of damaging equipment or the environment:

- (a) send out any *energy* from the *generating unit*, except:
  - (1) in accordance with a *dispatch instruction*;
  - (2) in response to remote control signals given by *NEMMCO* or its agent; or
  - (3) in connection with a test conducted in accordance with the requirements of this Chapter or Chapter 5; or
  - (4) in the case of a *scheduled generating unit*:
    - (i) in accordance with the *self-commitment* procedures specified in clause 4.9.6 up to the *self-dispatch level*; or
    - (ii) as a consequence of operation of the *generating unit's* automatic *frequency response mode* to *power system* conditions;
- (b) adjust the *transformer tap position* or *excitation control system voltage* set-point of a *scheduled generating unit* except:
  - (1) in accordance with a *dispatch instruction*;



- (2) in response to remote control signals given by *NEMMCO* or its agent;
- (3) if, in the *Scheduled Generator's* reasonable opinion, the adjustment is urgently required to prevent material damage to the *Scheduled Generator's plant* or associated equipment, or in the interests of safety; or
- (4) in connection with a test conducted in accordance with the requirements of rule 5.7;
- (c) *energise a connection point* in relation to a *generating unit* without obtaining approval from *NEMMCO* immediately prior to *energisation*;
- (d) *synchronise or de-synchronise a scheduled generating unit* with a *nameplate rating* of 30MW or more, without prior approval from *NEMMCO* or other than in response to a *dispatch instruction* except:
  - (1) *de-synchronisation* as a consequence of the operation of automatic protection equipment; or
  - (2) where such action is urgently required to prevent material damage to *plant* or equipment or in the interests of safety;
- (e) change the *frequency response mode* of a *scheduled generating unit* without the prior approval of *NEMMCO*; or
- (f) remove from service or interfere with the operation of any *power system* stabilising equipment installed on that *generating unit*.

#### **[60] Clause 4.9.5 Form of dispatch instruction**

Omit clause 4.9.5(a) and substitute:

- (a) A *dispatch instruction* for a *scheduled generating unit, semi-scheduled generating unit, scheduled network service or scheduled load* must include the following:
  - (1) specific reference to the *generating unit* (including any aggregated *generating unit*), *scheduled network service* or *scheduled load* or other *facility* to which the *dispatch instruction* applies;
  - (2) the desired outcome of the *dispatch instruction* (if applicable) such as *active power, reactive power, transformer tap* or other outcome;
  - (3) in the case of a *dispatch instruction* under clause 4.9.2, the *ramp rate* (if applicable) which is to be followed by the *generating unit* or a specific target time to reach the outcome specified in the *dispatch instruction*;

- (4) the time the *dispatch instruction* is issued;
- (5) if the time at which the *dispatch instruction* is to take effect is different from the time the *dispatch instruction* is issued, the start time; and
- (6) in the case of a *dispatch instruction* for a *semi-scheduled generating unit*:
  - (i) a notification as to whether the *dispatch interval* to which the *dispatch instruction* relates is a *semi-dispatch interval* or a *non semi-dispatch interval*; and
  - (ii) the *dispatch cap*.

#### **[61] Clause 4.9.8 General responsibilities of Registered Participants**

After clause 4.9.8(d), insert:

- (e) A *Semi-Scheduled Generator* must ensure that each of its *semi-scheduled generating units* is at all times able to comply with its latest *generation dispatch offer*.

#### **[62] Clause 4.11.1 Remote control and monitoring devices**

In clause 4.11.1(a)(1), after the words “*scheduled generating unit*” insert the words “and *semi-scheduled generating unit*”.

#### **[63] Chapter 10 Substituted Definitions**

In Chapter 10, omit the following definitions and substitute:

##### **available capacity**

The total MW capacity available for *dispatch* by a *scheduled generating unit*, *semi-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).

##### **central dispatch**

The process managed by *NEMMCO* for the *dispatch* of *scheduled generating units*, *semi-scheduled generating units*, *scheduled loads*, *scheduled network services* and *market ancillary services* in accordance with rule 3.8.

**Directed Participant**

A *Scheduled Generator, Semi-Scheduled Generator, Market Generator, Scheduled Network Service Provider* or *Market Customer* the subject of a *direction*.

**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, semi-scheduled generating unit, a scheduled load, a scheduled network service, an ancillary service generating unit* or an *ancillary service load* in accordance with rule 3.8, or a *direction* or operation of capacity the subject of a *reserve contract* as appropriate.

**dispatch offer price**

The price submitted by a *Scheduled Generator, Semi-Scheduled Generator* or a *Scheduled Network Service Provider* for a *price band* and a *trading interval* in a *dispatch offer*.

**dispatched generating unit**

A *scheduled generating unit* which has received instructions from *NEMMCO* in accordance with a *dispatch schedule*.

**generation dispatch offer**

A notice submitted by a *Scheduled Generator* or *Semi-Scheduled Generator* to *NEMMCO* relating to the *dispatch* of a *scheduled generating unit* or a *semi-scheduled generating unit* in accordance with clause 3.8.6.

**registered bid and offer data**

Data submitted by *Scheduled Generators, Semi-Scheduled Generators* and *Market Participants* to *NEMMCO* in relation to their *scheduled loads, scheduled generating units, semi-scheduled generating units* and *scheduled market network services* in accordance with schedule 3.1.

**[64] Chapter 10 New Definitions**

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

**dispatch cap**

The amount of electricity specified in a *dispatch instruction* as the *semi-scheduled generating unit's* maximum permissible *active power* at the end of the *dispatch interval* specified in that *dispatch instruction*.

**non semi-dispatch interval**

For a *semi-scheduled generating unit*, a *dispatch interval* other than a *semi-dispatch interval*.

**semi-dispatch interval**

For a *semi-scheduled generating unit*, a *dispatch interval* for which either:

- (a) a *network constraint* would be violated if the *semi-scheduled generating unit's* generation were to exceed the *dispatch cap* specified in the related *dispatch instruction* at the end of the *dispatch interval*; or
- (b) the *dispatch cap* specified in that *dispatch instruction* is less than the *unconstrained intermittent generation forecast* at the end of the *dispatch interval*,

and which is notified by *NEMMCO* in that *dispatch instruction* to be a *semi-dispatch interval*.

**unconstrained intermittent generation forecast**

The forecast prepared by *NEMMCO* in accordance with rule 3.7B of the *available capacity* of each *semi-scheduled generating unit*.

**END OF DRAFT RULE**