



National Electricity Amendment (Fully Co-optimised and Alternative Constraint Formulations) Rule 2009 No. 18

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

National Electricity Amendment (Fully Co-optimised and Alternative Constraint Formulations) Rule 2009 No. 18

1. Title of Rule

This Rule is the *National Electricity Amendment (Fully Co-optimised and Alternative Constraint Formulations) Rule 2009 No. 18*.

2. Commencement

This Rule commences operation on 1 September 2009.

3. Amendment of National Electricity Rules

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

Schedule 1 Amendment of National Electricity Rules

(Clause 3)

[1] Clause 3.7.2 Medium term PASA

Omit clause 3.7.2(c)(3) and substitute:

- (3) forecast *network constraints* known to *AEMO* at the time;

[2] Clause 3.7.3 Short term PASA

Omit clause 3.7.3(d)(3) and substitute:

- (3) anticipated *network constraints* known to *AEMO* at the time; and

[3] Clause 3.8.1 Central Dispatch

Omit clauses 3.8.1(b)(5) and (6) and substitute:

- (5) *network constraints*;
- (6) *intra-regional losses* and *inter-regional losses*;

[4] Clause 3.8.1 Central Dispatch

In clause 3.8.1(b)(10), omit “and” where lastly occurring.

[5] Clause 3.8.1 Central Dispatch

In clause 3.8.1(b)(11), omit “.” and substitute

; and

- (12) the management of negative *settlements residue*, in accordance with clause 3.8.10 and any guidelines issued by *AEMO* under clause 3.8.10(c).

[6] Clause 3.8.10 Network Constraints

Omit clauses 3.8.10(b) and 3.8.10(c) and substitute:

- (b) Subject to paragraph (e), *AEMO* must determine and represent *network constraints* in *dispatch* which may result from limitations on *intra-regional* or *inter-regional* power flows and, in doing so, must use a *fully co-optimised network constraint formulation*.
- (c) *AEMO* must, in accordance with the *Rules consultation procedures*, develop and *publish* by 1 June 2010, and, where necessary, amend *network constraint* formulation guidelines, to address, amongst other things, the following matters:
 - (1) the circumstances in which *AEMO* will use *alternative network constraint formulations* in *dispatch*;
 - (2) the process by which *AEMO* will identify or be advised of a requirement to create or modify a *network constraint* equation, including in respect of:
 - (i) the methodology to be used by *AEMO* in determining *network constraint* equation terms and co-efficients; and
 - (ii) the means by which *AEMO* will obtain information from, and disseminate information to, *Scheduled Generators*, *Semi-Scheduled Generators* and *Market Participants*;
 - (3) the methodology to be used by *AEMO* in selecting the form of a *network constraint* equation, including in respect of the location of terms on each side of the equation;
 - (4) the process to be used by *AEMO* for applying, invoking and revoking *network constraint* equations in relation to different types of *network constraints*, including in respect of:
 - (i) the circumstances in which *AEMO* will use *alternative network constraint formulations* and *fully co-optimised network constraint formulations*; and

- (ii) the dissemination of information to *Scheduled Generators, Semi-Scheduled Generators and Market Participants* in respect of this process; and
- (5) *AEMO's* policy in respect of the management of negative *settlements residue*, by intervening in the *central dispatch* process under clause 3.8.1 through the use of *fully co-optimised network constraint formulations*, including in respect of the process to be undertaken by *NEMMCO* to manage negative *settlements residue*.
- (d) *AEMO* must at all times comply with the *network constraint* formulation guidelines issued in accordance with paragraph (c).
- (e) Where, in *AEMO's* reasonable opinion, a specific *network constraint* is such that use of a *fully co-optimised network constraint formulation* is not appropriate, *AEMO* may apply an *alternative network constraint formulation* for the expected duration of that *network constraint*, if *AEMO*:
 - (1) has previously identified, in guidelines issued in accordance with paragraph (c), that it may use an *alternative network constraint formulation* in respect of that type of *network constraint*; and
 - (2) reasonably considers that it can apply an *alternative network constraint formulation* without prejudicing its obligation to operate a *central dispatch* process to *dispatch scheduled generating units, semi-scheduled generating units, scheduled loads, scheduled network services and market ancillary services* in order to balance *power system supply and power system demand*, consistent with using its reasonable endeavours to maintain *power system security* in accordance with Chapter 4 of the *Rules* and to maximise the value of *spot market* trading on the basis of *dispatch offers and dispatch bids*, in accordance with clause 3.8.1(a) and (b).
- (f) *AEMO* must represent *network constraints* as inputs to the *dispatch* process in a form that can be reviewed after the *trading interval* in which they occurred.
- (g) Within 3 years from 1 September 2009, the *AEMC* must commence a review, under section 45 of the *National Electricity Law*, in respect of the efficiency with which *AEMO* is managing

circumstances in which the *settlements residue* arising in respect of a *trading interval* is a negative amount.

[7] Clause 3.9.7 Pricing for constrained-on scheduled generating units

Omit clause 3.9.7(a) and substitute:

- (a) In the event that a *network constraint* causes a *scheduled generating unit* to be *constrained-on* in any *dispatch interval*, that *scheduled generating unit* must comply with *dispatch instructions* from *AEMO* in accordance with its availability as specified in its *dispatch offer* but may not be taken into account in the determination of the *dispatch price* in that *dispatch interval*.

[8] Clause 3.13.4 Spot Market

Omit clause 3.13.4(o) and substitute “[Deleted]”.

[9] Clause 3.13.8 Public Information

Omit clause 3.13.8(a)(5) and substitute:

- (5) *network constraints by trading interval*.

[10] Chapter 10 New definitions

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

alternative network constraint formulation

A network constraint equation formulation used by AEMO other than a fully co-optimised network constraint formulation.

fully co-optimised network constraint formulation

A network constraint equation formulation that allows AEMO, through direct physical representation, to control all the variables within the equation that can be determined through the central dispatch process. Some variables may not be included in accordance with clause 3.8.10(c) of the Rules if control of such variables would not materially enhance the security of the power system due to the small size of their coefficients.

[11] Chapter 10 Deleted definitions

Omit the following definitions:

inter-regional network constraint

A constraint on the transmission and/or distribution networks between regions as specified in clause 3.6.4(a).

intra-regional network constraint

A constraint on part of the transmission and distribution networks within a region as specified in clause 3.6.4(b).

END OF RULE AS MADE
