



Australian Energy Market Commission

Congestion Management Review

Exposure Draft

March 2008

Interested stakeholders are invited to comment on the Exposure Draft by **15 April 2008**.

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Citation

AEMC 2006, *Congestion Management Review*, Exposure Draft, March 2008, Sydney

About the AEMC

The Council of Australian Governments, through its Ministerial Council on Energy, established the Australian Energy Market Commission (AEMC) in July 2005 to be the Rule maker for national energy markets. The AEMC is currently responsible for Rules and policy advice covering the National Electricity Market. It is a statutory authority. Our key responsibilities are to consider Rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

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Recommendations from the Congestion Management Review Draft Report

1 Introduction

In the Terms of Reference for the Congestion Management Review (CMR), the Ministerial Council on Energy (MCE) requested that the Australian Energy Market Commission (the Commission) provide draft Rule changes to implement the proposed arrangements.¹ This Exposure Draft seeks comment on the legal draft of the recommendations as set out in the CMR Draft Report. These recommendations proposed changes to:

- the recovery of negative settlement residues (recommendation 3);
- network constraint formulation (recommendations 6 and 7); and
- information on congestion (recommendation 8 and 9).

The Commission is seeking consultation on this Exposure Draft as it moves toward the CMR Final Report. Interested stakeholders are invited to make a submission on the legal drafting by **15 April 2008**.

Following the consideration of submissions, the Commission is also proposing an amendment to rule 5.4A the National Electricity Rules (Rules) to clarify new connection applicant contributions for costs associated with negotiated transmission access. The Commission will publish a policy paper with proposed drafting on this issue shortly.

2 Recovery of Negative Settlement Residues

Recommendation 3:

- That negative settlement residues no longer be netted-off against positive residues within a billing week; and
- That negative residues be funded by directly billing the importing region's TNSP.

2.1 Background

In the CMR Draft Report, the Commission recommended a change to the existing method for funding negative settlement residues. Under the new method, the NEMMCO would directly bill the importing region's Transmission Network Service Provider (TNSP) for all negative residues accrued on the relevant interconnector for each billing period. This approach recovers negative settlement from the importing region's TNSP, and therefore the customers in that region, because those customers are likely to benefit from importing power from a higher priced region into their

¹ The MCE Terms of Reference are available on the AEMC website, www.aemc.gov.au.

lower priced region (counter price flows). This is the case if the Regional Reference Price in the importing region is lower than it would have been in absence of the counter price flows.

2.2 Policy Considerations

This recovery method represents a new transaction between NEMMCO and TNSPs that is separate to the existing transactions related to the Settlement Residue Auction (SRA): the distribution of SRA auction proceeds to the TNSP; and the allocation of residues associated with unsold Inter-Regional Settlement Residue units to the TNSP. While the net effect of these transactions may be the same whether or not they are separate, linking them would implement policy different from recovering negative residues directly from TNSPs. This arrangement provides NEMMCO with the flexibility to recover negative settlement residues in a timely manner rather than being limited by the timing of auctions.

The Commission intends that TNSPs will be able to pass through to their customers the cost of funding negative settlement residues. The existing framework for the administration and allocation of the network service charges enables TNSPs to incorporate these additional costs into their network service charges.

The process of NEMMCO charging the importing region's TNSP directly for any negative settlement residues, would improve the transparency and clarity of the recovery process. The Commission considers that in this regard, these changes promote the National Electricity Objective (NEO) by encouraging more efficient operation of the electricity services.

2.3 Legal Drafting

The new method will replace NEMMCO's current practice of netting-off negative residues against positive residues within a billing week (Method 1) and then recovering any outstanding negative residues from SRA proceeds (Method 2). Therefore, the proposed Negative Inter-regional Settlements Residue Amounts Rule (proposed Rule 1) deletes both Method 1 and Method 2 and replaces them with the new recovery method (clause 3.6.5(a)(4)).

The current arrangement with inter-regional TUOS (which is due to expire on 1 January 2009) is unaffected by the new method.

The proposed Rule implements the new recovery method in clause 3.6.5(4A). Should there be any unrecovered negative residues at the time of the proposed Rule's commencement, a savings and transitional provision enables NEMMCO to recover those residues using the method in operation at the time the residues were incurred, i.e. Method 2.

Appendix A contains the full drafting of the proposed Negative Inter-regional Settlements Residue Amounts Rule.

3 Network Constraint Formulation

Recommendation 4:

...That the need for physical intervention as a means of managing negative settlement residues, and the level of the threshold for invoking such an intervention should be reassessed in three years with a view to complete removal if possible...

Recommendation 6:

Include within Chapter 3 of the Rules the requirement for NEMMCO to use fully co-optimised network constraint formulation to the extent practicable, except where NEMMCO reasonably determines that an alternative constraint formulation is necessary to meet system security requirements or to manage negative settlement residues provided that NEMMCO's use of an alternative constraint formulation is consistent with the guidelines referred to in Section 6.2.2 of the CMR Draft Report.

Recommendation 7:

That NEMMCO be obliged to :

- Develop constraint guidelines outlining the methodology and process to be followed when developing, formulating and implementing constraint equations to assist participants to assess the impact of constraints on dispatch and pricing;
- Comply with its published constraint guidelines; and
- Consult with stakeholders when developing or modifying those guidelines.

3.1 Background

The requirement for NEMMCO to use fully co-optimised network constraint formulation to the extent practicable is to be included within Chapter 3 of the Rules. This decision will align the Rules with the MCE Statement on Transmission.² In which the MCE outlined its policy decision in support of fully co-optimised constraint formulation.

The CMR Draft Report also recommended that NEMMCO be obliged to develop (in consultation with industry participants) and comply with, constraint guidelines. These guidelines will outline the methodology and process NEMMCO will follow when developing, formulating and implementing constraint equations. This will help participants assess the impact of constraints on dispatch and pricing. These guidelines will also include the circumstances under which NEMMCO may use an alternative constraint formulation.

Recommendation 4 proposed, in part, a review in three years to: (1) reassess NEMMCO's use of physical intervention as a means to manage negative settlement residues; and (2) the threshold of intervention. Within three years of commencing

² MCE, Statement on NEM Electricity Transmission, May 2005.

proposed Rule 2, the Commission will undertake this review to assess the efficiency with which NEMMCO is managing the accumulation of negative residues.

3.2 Policy Considerations

Since the use of fully co-optimised network constraint formulation is the standard, as opposed to an exception, the Rules implementing this policy should be in Chapter 3 rather than in a derogation, where they are currently (Part 8 of Chapter 8A). This means any future decision to move away from using this constraint formulation would be through a Rule change and subject to the associated consultation processes.

The Commission recognises that there may be circumstances in which an alternative constraint formulation is necessary. The proposed Fully Co-optimised and Alternative Constraint Formulation Rule (proposed Rule 2) specifies that the use of an alternative constraint formulation is to be only by exception. Proposed Rule 2 requires NEMMCO to identify the circumstances in which these exceptions may occur and the manner in which it would develop and implement an alternative constraint formulation. This process must be transparent and predictable.

Proposed Rule 2 identifies the objective of the guidelines but leaves NEMMCO the discretion to determine the process and detail of the guidelines in consultation with industry stakeholders. The constraint guidelines must also detail NEMMCO's policy for managing negative settlement residues. This includes both the action NEMMCO will take to manage negative residues as well as the threshold trigger for taking that action.

The policy set out in the Draft Report is for NEMMCO to continue to have a power to manage the accumulation of negative settlement residues. To give effect to this, NEMMCO will be required to undertake the central dispatch process (clause 3.8.1), subject to its policy for managing negative settlement residues, as set out in the constraint guidelines.

These recommendations provide greater transparency, predictability and consistency in NEMMCO's management of constraints. This will, in turn, improve participants' ability to predict the emergence and impact of congestion, thereby enabling them to develop a more appropriate measure to manage the risks resulting from congestion. The Commission has taken the view that by providing participants with greater information, this will encourage more efficient operation of the electricity services and will therefore promote the NEO.

Submissions to the CMR draft report supported of this recommendation as part of the package of incremental changes to the made to the Rules.

3.3 Legal Drafting

Clause 3.8.10 of proposed Rule 2 sets out the provisions related to constraint formulation, previously included in Part 8 of Chapter 8A of the Rules.

Clauses 3.8.10(c) and (d) set out the requirements of the constraint guidelines.

With the adoption of fully co-optimised constraint formulation, the Rules no longer need to distinguish between intra-regional and inter-regional constraints. Proposed Rule 2 clarifies this in the Rules where relevant.³

The requirement and parameters for the Commission's review on NEMMCO's policy for managing negative settlement residues is set out in clause 3.8.10(g)

Appendix B contains the full drafting of the proposed Fully Co-optimised and Alternative Constraint Formulation Rule.

4 Congestion Information Resource

Recommendation 8:

That the Rules be amended to:

- Require NEMMCO to develop and publish an information resource that assists Market Participants to understand and predict the nature and timing of events that are likely to materially affect constraint in the dispatch process. NEMMCO must develop this information resource in consultation with industry;
- The "events" referred to above should include at a minimum, network outages, commissioning (or decommissioning) of new generating units, loads or network assets and new or modified network support constraints;
- NEMMCO must publish the information required above on a timely basis and must publish updates to that information provided under this Rule as soon as practicable;
- The information resource must be transparent and give Market Participants confidence that all relevant information is published in a timely manner;
- In developing or changing this information resource, NEMMCO must consult with industry; and
- Oblige TNSPs and other Registered Participants to provide that information required by NEMMCO to develop this information source.

Recommendation 9:

- That NEMMCO develops a methodology in consultation with participants for the production of mis-pricing information that covers all material congestion in the NEM;
- That NEMMCO publishes mis-pricing information on a quarterly basis; and
- That NEMMCO's other resource commitments be taken into account when establishing a commencement date for this requirement.

³ See clauses 3.7.2(c)(3), 3.7.2(d)(3), 3.8.1(b)(5) and (6), 3.9.7(a) and 3.13.8(a)(5) of the Rules.

4.1 Background

The Commission considers that there is a need to develop an information resource to assist market participants to understand patterns of network congestion and make projections of market outcomes in the presence of network congestion, a Congestion Information Resource (CIR). This resource is to be developed and published by NEMMCO.

The CIR will be comprised of a number of different types of information. There is a need for market participants to be informed about planned network events other than network outages that may result in different constraint equations being formulated and/or invoked. These events should include at a minimum, network outages, commissioning (or decommissioning) of new generating units, load or network assets and new or modified network support agreements. There is also a need for NEMMCO to publish information on the mis-pricing of generation, based on constraint shadow prices, in order to assist market participants to better manage congestion in the medium to long-term.

4.2 Policy Considerations

The proposed Congestion Information Resource Rule (proposed Rule 3) identifies the objective of the CIR as well as the framework for developing the CIR. The process for publication and detail of the information in the CIR is left for NEMMCO to develop in consultation with industry stakeholders. This ensures that the information provided in the CIR is beneficial to stakeholders and takes into account the cost of providing the information. This consultation process will lead to the development of the CIR guidelines.

In the interim, following the commencement of the Rule and prior to NEMMCO undergoing consultation on the CIR guidelines, NEMMCO is to use the interim CIR as described in Chapter 11. This interim CIR provides NEMMCO with the minimum requirements that the congestion resource should have and will include the information currently published on planned network outages under rule 3.7A of the Rules, the information currently published voluntarily by NEMMCO in the Network Outage Schedule and information on mis-pricing in the NEM. This interim resource will continue until such time as NEMMCO produces the first congestion information resource, as determined through consultation with industry, which must improve the resource in accordance with the objective in 3.7A(a).

Improved clarity and predictability regarding the impact of a TNSPs actions on likely transfer capability, and on its ultimate expression in constraint equations will enable participants to better manage their physical and financial trading risks. Such a resource would promote efficient investment in and operation of the NEM, and would therefore promote the NEO.

Most submissions were generally supportive of these incremental changes, provided that the requirements for NEMMCO to provide information were not too onerous.

4.3 Legal Drafting

Clause 3.7A(a) states that the objective of the congestion information resource is to provide information in a cost effective manner to market participants to enable them

to understand patterns of network congestion and make projections of market outcomes in the presence of network congestion. Clause 3.7A(b) requires this resource to comprise information on planned network events that are likely to materially affect network constraints and historical data on mis-pricing in the NEM. Clause 3.7A(c) allows NEMMCO to make changes to the congestion information resource, provided that they further the objective stated in clause 3.7A(a) and are in accordance with the CIR guidelines.

The proposed Rule 3 requires NEMMCO to develop the congestion information resource guidelines. These guidelines will provide a description of

- the categories of information;
- the scope and type of information to be provided by TNSPs;
- the process for obtaining information from TNSPs;
- the process of providing market participants with the information; and
- the intervals for updating and publishing the CIR.

NEMMCO must develop, consult on, and comply with these guidelines (clauses 3.7A(j) to (l)).

Clauses 3.7A(m) to (o) describe the information to be given to NEMMCO by the TNSPs. These clauses state that when there is a material change to the information previously provided by a TNSP, the TNSP must provide NEMMCO with revised information as soon as practicable.

Clause 3.13.4(y) includes the requirement for NEMMCO to publish the congestion information resource in accordance with “the timetable”.

Appendix C contains the full drafting of the proposed Congestion Information Resource Rule.

5 Consultation

This Exposure Draft consults on the draft legal text to implement the draft recommendations. Interested stakeholders are invited to make comment on the legal drafting by **15 April 2008**.

Send submissions can be sent electronically to submissions@aemc.gov.au

Or by mail to:
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

A Negative Inter-regional Settlements Residue Rule

Draft National Electricity Amendment (Negative Inter-regional Settlements Residue Amounts) Rule 2008

1. Title of Rule

This Rule is the *Draft National Electricity Amendment (Negative Inter-regional Settlements Residue Amounts) Rule 2008*.

2. Commencement

This Rule commences operation on [insert date]

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

[1] Rule 3.6.5(4) Settlements residue due to network losses and constraints

Omit rule 3.6.5 and substitute:

(a) *Settlements residue* will be allocated, and distributed or recovered by NEMMCO in accordance with the following principles:

(1) full effect is to be given to the *jurisdictional derogations* contained in Chapter 9 relating to *settlements residue*;

(2) the portion of the *settlements residue* attributable to *regulated interconnectors* (as adjusted to take into account the effect of any applicable *jurisdictional derogations* referred to in clause 3.6.5(a)(1)) will be distributed or recovered in accordance with rule 3.18;

(3) the remaining *settlements residue*, including the portion of *settlements residue* due to *intra-regional loss factors*, will be distributed to or recovered from the appropriate *Transmission Network Service Providers* (which will not include *Market Network Service Providers*);

(4) subject to clauses 11.1.1 and 11.1.2, if the *settlements residue* arising in respect of a *trading interval*, after taking into account any adjustment in accordance with clauses 5.7.7(aa)(3) or (ab), is a negative amount, then, in respect of each *billing period* in which a negative *settlements residue* arises, the amount may be recovered:

(i) from the appropriate *Transmission Network Service Provider* (which will not include *Market Network Service Providers*) within the *region* (the “importing region”) to which electricity is transferred from another *region* (the “exporting region”) through *regulated interconnectors*;

(ii) at a payment interval, and by a method, to be determined by NEMMCO.

(4A) subject to clauses 3.6.5(a)(4), 11.1.1 and 11.1.2, interest costs incurred by NEMMCO in relation to any unrecovered negative

settlements residue amounts referred to in clause 3.6.5(a)(4) may, in respect of each *billing period* in which a negative *settlements residue* arises, be recovered:

(i) from the appropriate *Transmission Network Service Provider* (which will not include *Market Network Service Providers*) within the *region* (the “importing region”) to which electricity is transferred from another *region* (the “exporting region”) through *regulated interconnectors*;

(ii) at a payment interval, and by a method to be determined by NEMMCO.

(5) for the purposes of the distribution or recovery of *settlements residue* that is attributable to *regulated interconnectors*:

(i) all of the *settlements residue* relating to electricity that is transferred from one *region* (the “exporting region”) to another *region* (the “importing region”) must be allocated to *Network Service Providers* in respect of a *network* located in the importing region (or part of a *network* located in the importing region);

(ii) the importing region must, in respect of the period from *market commencement* until the expiry date referred to in subparagraph (iv), pay a charge to the exporting region reflecting the extent of the use of a *network* located in the exporting region (or part of a *network* located in the exporting region) to transfer the electricity from the exporting region to the importing region;

(iii) the amount of the charge described in subparagraph (ii) must not exceed the amount of the *settlements residue* referred to in subparagraph (i), and must be agreed between the *participating jurisdictions* in which the importing region and the exporting region are located; and

(iv) the expiry date referred to in subparagraph (ii), means 1 July 2009 or the date of commencement of rules which make

alternative provision in the *Rules* for inter-regional *settlements*, whichever is the earlier date; and

(6) any portion of *settlements residue* distributed to a *Network Service Provider* or amount paid on that portion under clause 3.15.10A (if any), or rule 3.18 to a *Network Service Provider*, including any such payments as adjusted by a *routine revised statement* or *special revised statement* issued under rule 3.15, net of any portion of *settlements residue* recovered from the *Network Service Provider* in accordance with clause 3.6.5(a)(4), will be used to offset *network service charges*.

(b) A *Transmission Network Service Provider* or its jurisdictional delegate is a *Market Participant* for the purposes of clause 3.3.1 and rule 3.15 (excluding clause 3.15.1(b)) but not otherwise.

~~(c) Subject to clauses 11.1.1 and 11.1.2:~~

~~(i) clause 3.6.5(a)(4) does not have effect during the period commencing on 1 July 2006 and ending at the last moment of 30 June 2009 but comes into effect again at the end of that period; and~~

~~(ii) clauses 3.6.5(a)(4A) and (4B) expire at the end of that period.~~

[2] Rule 3.18.4 Proceeds and fees

Omit rule 3.18.4 and substitute:

(a) *NEMMCO* must distribute:

(1) subject to clauses 3.6.5(a)(4) and (4A), proceeds from each *auction* in respect of a *directional interconnector*, and

(2) subject to clauses 3.18.4(b) and (c), any portion of the *settlements residue* allocated to the *directional interconnector* which is not the subject of a *SRD agreement*, to the appropriate *Network Service Providers* in accordance with the principles referred to in clause 3.6.5 in relation to the allocation and distribution of *settlements residue* attributable to *regulated interconnectors*.

(b) The costs and expenses incurred by *NEMMCO* in establishing and administering the arrangements contemplated by this rule 3.18, in conducting *auctions* under this

rule 3.18 and in entering into and administering *auction participation agreements* and *SRD agreements* under this rule 3.18 will be recovered from *settlements residue* by way of *auction expense fees*.

(c) The *auction expense fees* are to be developed by NEMMCO in accordance with the *auction rules* and approved by the *settlement residue committee*, and recovered as follows:

(1) to the extent the *settlements residue* is distributed to *eligible persons* under clause 3.18.1(d), in accordance with the *auction rules*; and

(2) to the extent the *settlements residue* is distributed to *Network Service Providers* under clause 3.18.4(a)(2), as if the *settlements residue* was being distributed to *eligible persons* in accordance with the *auction rules*.

(d) The *auction expense fees* for an *auction* are to be *published* before the *auction*.

(e) *Eligible persons* and NEMMCO must pay *auction amounts* in accordance with the *auction rules*, and, for the avoidance of doubt, amounts payable by *eligible persons* to NEMMCO under *SRD agreements* will not be regarded as amounts payable under the *Rules* for the purposes of rule 3.15.

(f) NEMMCO may nominate an electronic funds transfer facility for the purposes of paying *auction amounts* and, if it does so, *eligible persons*, *Network Service Providers* and NEMMCO must use that facility for paying and receiving *auction amounts*.

[3] Rule 11.1 Rules consequent on making of the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006

Omit rule 11.1.1 and substitute:

Rules consequent on making of the National Electricity Amendment (Negative Inter-regional Settlements Residue Amounts) Rule 2008

11.1.1 Recovery of accrued negative settlements residue

Clause 3.6.5(a)(4A), as in force immediately before [X] which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue Amounts) Rule 2008 commences operation, continues to apply to any negative *settlements residue* amounts arising before [X] and not recovered as at [X] until all such negative amounts have been recovered.

~~(b) Where negative *settlements residue* amounts arise on or after 1 July 2005 and are not recovered before 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation, then:~~

~~(i) the whole or any part of the amount may be recovered from the proceeds of the first *auction* after 1 July 2006 which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue) Rule 2006 commences operation; and~~

~~(ii) if the whole or a part of the amount is not recoverable under clause 11.1.1(b)(i), the unrecovered amount may be recovered from the proceeds of successive *auctions* until the negative amount is recovered.~~

~~(c) Clause 3.6.5(a)(4A), as in force immediately before 30 June 2009, continues to apply to any *negative settlements residue* amounts arising on or after 1 July 2006 but before 30 June 2009, and not recovered as at 30 June 2009, until all such negative amounts have been recovered.~~

[4] Rule 11.1.2 Recovery of interest costs associated with accrued negative settlements residue

Omit rule 11.1.2 and substitute:

(a) Where interest costs incurred by NEMMCO in relation to any unrecovered negative *settlements residue* amounts referred to in clause 3.6.5(a)(4A) (as in force immediately before [X] which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue Amounts) Rule 2008 commences operation) before [X] are not recovered before [X] which is the date the National Electricity Amendment (Negative Inter-regional Settlements Residue Amounts) Rule 2008 commences operation, then:

(i) the whole or any part of the interest costs may be recovered from the proceeds of the first *auction* after [X] which is the date National Electricity Amendment (Negative Inter-regional Settlements Residue Amounts) Rule 2008 commences operation:

(ii) if the whole or a part of the interest costs are not recoverable under clause 11.1.2(a)(i), the unrecovered interest costs may be recovered from the proceeds of successive *auctions* until the interest costs are recovered.

(b) Clause 3.6.5(a)(4B), as in force immediately before [X] which is the date the National Electricity Amendment (Negative Inter-Regional Settlements Residue Amounts) Rule 2008 commences operation, continues to apply to any interest costs arising before [X], and not recovered as at [X], until all such interest costs have been recovered.

B Fully Co-optimised and Alternative Constraint Formulations Rule

Draft National Electricity Amendment (Fully Co-optimised and Alternative Constraint Formulations) Rule 2008

1. Title of Rule

This Rule is the *Draft National Electricity Amendment (Fully Co-optimised and alternative constraint formulations) Rule 2008*.

2. Commencement

This Rule commences operation on [insert date]

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

[1] Chapter 8A, Part 8 Network Constraint Formulation, clause (a) [Deleted]

Omit Chapter 8A, Part 8, clause (a)

[2] Part 8, Chapter 8A, clause (b) [Deleted]

Omit Chapter 8A, Part 8, clause (b)

[3] Clause 3.8.1(b) Central Dispatch

Omit clause 3.8.1(b) and substitute:

(b) The *central dispatch* process should aim to maximise the value of *spot market* trading i.e. to maximise the value of *dispatched load* based on *dispatch bids* less the combined cost of *dispatched generation* based on *generation dispatch offers*, *dispatched network services* based on *network dispatch offers*, and *dispatched market ancillary services* based on *market ancillary service offers* subject to:

- (1) *dispatch offers*, *dispatch bids* and *market ancillary service offers*;
- (2) *constraints* due to availability and *commitment*;
- (3) *non-scheduled load* requirements in each *region*;
- (4) *power system security* requirements determined as described in Chapter 4 and the *power system security and reliability standards*;
- (5) ~~*intra-regional network constraints*~~ and ~~*intra-regional losses*~~;
- (6) *intra-regional losses network constraints* and *inter-regional losses*;
- (7) *constraints* consistent with *registered bid and offer data*;
- (8) current levels of *dispatched generation*, *load* and *market network services*;
- (9) *constraints* imposed by *ancillary services* requirements;
- (10) arrangements designed to ensure pro-rata loading of tied *registered bid and offer data*; and
- (11) ensuring that as far as reasonably practical, in relation to a *direction* or *dispatch* of *plant* under a *reserve contract*.

(A) the number of *Affected Participants* is minimised; and

(B) the effect on *interconnector flows* is minimised.

(12) the management of negative *settlement residues*, in accordance with clause 3.8.10 and any guidelines issued by NEMMCO under clause 3.8.10(c).

[4] Clause 3.8.10 Network Constraints

Omit clause 3.8.10 and substitute:

(a) In accordance with the *NEMMCO power system security responsibilities* and any other standards set out in Chapter 4, *NEMMCO* must determine any *constraints* on the *dispatch* of *scheduled generating units*, *scheduled network services*, *scheduled loads*, *ancillary service generating units* or *ancillary service loads* which may result from planned *network outages*.

(b) Subject to clause 3.8.10(e), *NEMMCO* must determine and represent *network constraints* in *dispatch* which may result from limitations on both *intra-regional* and *inter-regional* power flows, and in doing so, must use a form of *network constraint* equation that allows *NEMMCO* to control all the variables within the equation (ie, a *fully co-optimised direct physical representation network constraint formulation*).

(c) *NEMMCO* must, in accordance with clause 8.9, develop, publish, and, where necessary, amend *network constraint* formulation guidelines, to address, amongst other things, the following matters:

(i) the circumstances in which *NEMMCO* will use *alternative network constraint formulations* in *dispatch*;

(ii) the process by which *NEMMCO* will identify or be advised of a requirement to create or modify a *network constraint* equation, including in respect of:

(1) the methodology to be used by *NEMMCO* in determining *network constraint* equation terms and co-efficients; and

(2) the means by which *NEMMCO* will obtain information from, and disseminate information to, *scheduled generators* and *market participants*;

(iii) the methodology to be used by NEMMCO in selecting the form of a network constraint equation, including in respect of the location of terms on each side of the equation;

(iv) the process to be used by NEMMCO for applying, invoking and revoking network constraint equations in respect of different types of network constraints, including in respect of:

(1) the circumstances in which NEMMCO will use alternative network constraint formulations and fully co-optimised direct physical representation network constraint formulations; and

(2) the dissemination of information to scheduled generators and market participants in respect of this process;

(v) NEMMCO's policy in respect of the management of negative settlements residues, by intervening in the dispatch process under clause 3.8.1 through the use of fully co-optimised direct physical representation network constraint formulations, including in respect of the process to be undertaken by NEMMCO to manage negative settlements residue.

(d) NEMMCO must at all times comply with the network constraint formulation guidelines issued in accordance with clause 3.8.10(c).

(e) Where, in NEMMCO's reasonable opinion, a specific network constraint is such that use of a fully co-optimised direct physical representation network constraint formulation is not appropriate, NEMMCO may apply an alternative network constraint formulation for the expected duration of that network constraint, if NEMMCO:

(i) has previously identified, in guidelines issued in accordance with clause 3.8.10(c), that it may use an alternative network constraint formulation in respect of that type of network constraint, and

(ii) reasonably considers that it can apply an alternative network constraint formulation without prejudicing its obligations to maintain power system security; and

(iii) 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, scheduled loads, scheduled network services and market ancillary services in order to balance power system supply and demand, using its

reasonable endeavours to maintain power system security in accordance with Chapter 4 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) *NEMMCO* 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 of [X], which is the date the National Electricity Amendment (Fully Co-optimised and Alternative Constraint Formulation) Rule 2008 commences operation, the AEMC must commence a review in respect of the efficiency with which NEMMCO is managing circumstances in which the settlements residue arising in respect of a trading interval is a negative amount.

(h) In conducting a review in accordance with clause 3.8.10(g), the AEMC must have regard to the national electricity objective stated at section 7 of the National Electricity Law.

(i) The review under clause 3.8.10(g):

(i) may be conducted in such manner as the AEMC considers appropriate;

(ii) may (but need not) involve public hearings;

(j) During the course of the review conducted under clause 3.8.10(g), the AEMC may:

(i) consult with any person or body that it considers appropriate;

(ii) establish working groups to assist it in relation to any aspect, or matter or thing that is the subject of the review;

(iii) commission reports by other persons on its behalf on any aspect, or matter or thing that is the subject of the review;

(iv) publish discussion papers or draft reports.

(k) At the completion of the review conducted under clause 3.8.10(g), the AEMC must issue a report and give a copy of the report to the Ministerial Council on Energy.

~~(c) The process used by NEMMCO to derive the network constraints must be clearly documented and made available to Scheduled Generators and Market Participants.~~

[5] Clause 3.7.2(c)(3)

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

(3) forecast ~~inter-regional network constraints and intra-regional network constraints~~ known to NEMMCO at the time.

[6] Clause 3.7.3(d)(3)

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

(3) anticipated ~~inter-regional network constraints and intra-regional network constraints~~ known to NEMMCO at the time.

[7] Clause 3.9.7(a)

Omit clause 3.9.7(a) and substitute:

(a) In the event that an ~~intra-regional 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 NEMMCO 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 3.13.8(a)(5)

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

(5) ~~inter-regional and intra-regional network constraints~~ by *trading interval*.

[9] Glossary

Insert the following new definitions:

Alternative network constraint formulations:

Any network constraint equation formulation used by NEMMCO other than a fully co-optimised direct physical representation network constraint formulation.

Fully co-optimised direct physical representation network constraint formulation:

A network constraint equation formulation that allows NEMMCO to control all the variables within the equation.

Delete 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).~~

C Congestion Information Resource

Exposure Draft National Electricity Amendment (Congestion Information Resource) Rule 2008

1. Title of Rule

This Rule is the *Exposure Draft National Electricity Amendment (Congestion Information Resource) Rule 2008*.

2. Commencement

This Rule commences operation on [insert date].

3. Amendment of the National Electricity Rules

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

Schedule 1 Amendment of National Electricity Rules

[1] Rule 3.7A Market information on planned network outages

Omit rule 3.7A and substitute:

3.7A Congestion information resource

- (a) The objective of the *congestion information resource* is to provide information in a cost effective manner to *Market Participants* to enable them to understand patterns of *network* congestion and make projections of *market* outcomes in the presence of *network* congestion ('the *congestion information resource objective*').

Development of congestion information resource

- (b) To implement the *congestion information resource objective*, *NEMMCO* must develop and *publish*, in accordance with this rule 3.7A, an information resource comprising of:

- (1) any *planned network event*; and
- (2) the incidence of congestion in the *National Electricity Market* through the use of historical data on *mis-pricing* in the *National Electricity Market*,

which is to be known as the *congestion information resource*.

- (c) *NEMMCO* must develop and amend from time to time, the *congestion information resource*:

- (1) consistently with the *congestion information resource objective*; and
- (2) in accordance with the *congestion information resource guidelines*.

- (d) Subject to paragraph (e), *NEMMCO* must update and *publish* the information contained in the *congestion information resource* (whether in whole or in part) at intervals to be determined by *NEMMCO* in accordance with the *congestion information resource guidelines*.

- (e) The intervals determined by *NEMMCO* for updating and *publishing* the *congestion information resource* must be included in the *timetable*.

- (f) Where there has been a material change in the facts or circumstances described in the *congestion information resource* and

NEMMCO considers *Market Participants* require the new information prior to the next periodic update of the *congestion information resource* in accordance with paragraph (d), *NEMMCO* may provide *Market Participants* with the new information in accordance with the *congestion information resource guidelines*.

- (g) *NEMMCO* must publish the first *congestion information resource* by [DATE B] and there must be a *congestion information resource* available at all times after that date.

Note: DATE B is intended to be 1 year after this Rule commences operation.

- (h) For the purpose of *publishing* the first *congestion information resource* under paragraph (b), *NEMMCO* may, subject to paragraph (c), *publish* the interim congestion information resource referred to in clause 11.X.2, as the first *congestion information resource*, in whole or in part.
- (i) *NEMMCO* must not *publish confidential information* as part of, or in connection with, the *congestion information resource*.

Congestion information resource guidelines

- (j) *NEMMCO* must develop and *publish* guidelines ('the *congestion information resource guidelines*') for and with respect to:
 - (1) the categories of information to be contained in the *congestion information resource* including the source of that information;
 - (2) the scope and type of the information to be provided by *Transmission Network Service Providers* in accordance with paragraphs (m) and (n);
 - (3) the processes to be implemented by *NEMMCO* to obtain the information from *Transmission Network Service Providers* in accordance with paragraphs (m) and (n);
 - (4) the determination of the intervals for updating and *publishing* the *congestion information resource* under paragraph (d); and
 - (5) the processes to be implemented by *NEMMCO* for providing *Market Participants* with information under paragraph (f).
- (k) *NEMMCO* must develop and *publish* the first *congestion information resource guidelines* in accordance with the *Rules consultation procedures* by [DATE A] and there must be a set of *congestion information resource guidelines* available and up to date at all times after this date.

Note: DATE A is intended to be 6 months after this Rule commences operation.

- (l) *NEMMCO* must amend the *congestion information resource guidelines* in accordance with the *Rules consultation procedures*.

Information of Transmission Network Service Providers

- (m) In addition to the obligations imposed on *Transmission Network Service Providers* by rule 3.7, *Transmission Network Service Providers* must provide *NEMMCO* with the information specified in the *congestion information resource guidelines*:
 - (1) in a form which clearly identifies *confidential information*; and
 - (2) in accordance with the *congestion information resource guidelines*.
- (n) Where there has been a material change in the information provided by a *Transmission Network Service Provider* under paragraph (m), the *Transmission Network Service Provider* must provide *NEMMCO* with the revised information as soon as practicable.
- (o) Information made available to *Market Participants* as part of, or in connection with, the *congestion information resource* by *NEMMCO* and *Transmission Network Service Providers* under this rule 3.7A:
 - (1) represents a *Transmission Network Service Provider's* current intentions and best estimates regarding *planned network events* at the time the information is made available;
 - (2) does not bind a *Transmission Network Service Provider* to comply with an advised *outage* program; and
 - (3) may be subject to change due to unforeseen circumstances outside the control of the *Transmission Network Service Provider*.

[2] Clause 3.13.4 Spot market

After clause 3.13.4(x), insert:

- (y) At intervals to be determined by *NEMMCO* under rule 3.7A(d), *NEMMCO* must, in accordance with the *timetable*, publish the updates to the *congestion information resource*.

New Chapter 10 Glossary Terms

congestion information resource

An information resource comprising of information on:

- (a) *planned network events* that are likely to materially affect *network constraints*;
- (b) the incidence of congestion in the *National Electricity Market* through the use of historical data on *mis-pricing* in the *National Electricity Market*.

that is developed, *published* and amended from time to time, by *NEMMCO* in accordance with rule 3.7A.

congestion information resource guidelines

Guidelines developed and *published* by *NEMMCO* in accordance with rule 3.7A(i) to (k) relating to the *publication* of the *congestion information resource*.

congestion information resource objective

The objective of the *congestion information resource* which is set out in rule 3.7A(a).

mis-pricing

The difference between:

- (a) the *settlement amount*; and
- (b) the *dispatch price* that would occur based on *dispatch bids* and *dispatch offers*,

calculated for each *regional reference node*.

network support agreements

An agreement between a *Network Service Provider* and a *Market Participant* to provide a non-network alternative to a network augmentation to improve network capability.

planned network event

An event which has been planned by a *Transmission Network Service Provider*, *NEMMCO*, or a *Market Participant* that will materially affect *network constraints* in relation to the *transmission system* including but not limited to:

- (a) a *network outage*;
- (b) the *connection* and *disconnection* of *generating units* or *load*; or
- (c) the commissioning or decommissioning of a *network* asset and new or modified *network control ancillary services*; and
- (d) *network support agreements*.

Chapter 11 Savings and Transitional Arrangements

11.X Savings and transitional arrangements as a result of the Congestion Information Resource

11.X.1 Definitions

- (a) In this rule 11.X:

interim congestion information resource means the information resource developed and *published* in accordance with rule 11.X.2.

network outage schedule means a schedule developed by *NEMMCO* based on information received from *Transmission Network Service Providers* in accordance with rule 3.7A that lists the planned *network outages* on the *transmission system* for a period of two years in advance that and identifies the likelihood of each planned *network outage* proceeding following an assessment of forecast demand for the period of the planned *network outage*.

11.X.2 Interim congestion information resource

- (a) Pending the development and *publication* of the *congestion information resource* under rule 3.7A, *NEMMCO* must develop an interim congestion information resource to meet *congestion information resource objective* in accordance with this rule 11.X.
- (b) The interim congestion information resource must include:
 - (1) the network outage schedule;

- (2) the incidence of congestion in the *National Electricity Market* through the use of historical data on *mis-pricing* in the *National Electricity Market*; and
 - (3) the following information on *network outages* planned for the subsequent thirteen months that in the reasonable opinion of the relevant *Transmission Network Service Provider*, will have or are likely to have a material effect on transfer capabilities:
 - (i) details of the forecast timing and the facts affecting the timing of planned *network outages* and the likelihood that the planned timing will vary; and
 - (ii) details of the reasons for the planned *network outage*, including the nature and extent of works required, if any;
 - (4) the following information on planned *network outages* referred to in subparagraph (3):
 - (i) an assessment of the projected impact on *intra-regional power transfer capabilities*, the accuracy of which must be appropriate to meet the *congestion information resource objective*; and
 - (ii) an assessment of the projected impact on *inter-regional power transfer capabilities*, the accuracy of which must be appropriate to meet the *congestion information resource objective*.
 - (5) any other information with respect to planned *network outages* referred in subparagraphs (3) and (4) that meets the *congestion information resource objective*.
- (c) Each month, in accordance with the *timetable* for the provision of information to *medium term PASA*, each *Transmission Network Service Provider* must provide to *NEMMCO*:
- (1) the information referred to in (b)(3); and
 - (2) for the purposes of paragraph (b)(5), any other information with respect to the planned *network outages* referred to in paragraphs (b)(3) and (b)(4) that meets the *congestion information resource objective*.
- (d) *NEMMCO* must *publish* the interim congestion information resource by [DATE A].

Note: DATE A is intended to be 6 months after this Rule commences operation.

- (e) For the purposes of the *congestion information resource guidelines published* under rule 3.7A(j), the interim congestion information resource is taken to be the *congestion information resource*.
- (f) *NEMMCO* must determine the frequency of updating (whether in whole or in part) and *publishing* the interim congestion information resource which must be included in the *timetable*.
- (g) At intervals to be determined by *NEMMCO* under paragraph (f), *NEMMCO* must in accordance with the *timetable*, publish the interim congestion information resource.