

**Australian Energy Market Commission**

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# RULE CHANGE

## **RULE DETERMINATION**

### **National Electricity Amendment (Network Support and Control Ancillary Services) Rule 2011**

**Rule Proponent(s)**

Australian Energy Market Operator

**Commissioners**

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7 April 2011

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## **About the AEMC**

The Council of Australian Governments, through its Ministerial Council on Energy (MCE), established the Australian Energy Market Commission (AEMC) in July 2005. The AEMC has two principal functions. We make and amend the national electricity and gas rules, and we conduct independent reviews of the energy markets for the MCE.

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## Summary

In response to a Rule change request from the Australian Energy Market Operator (AEMO), the Australian Energy Market Commission (AEMC or Commission) has made this Rule determination, and Rule as Made, on Network Support and Control Ancillary Services (NSCAS). NSCAS are services that are critical to maintaining the secure and reliable operation of the power system and are services that can be acquired by transmission network service providers (TNSPs) or AEMO. The Rule change request sought to implement recommendations from AEMO's Network Support and Control Services review.<sup>1</sup>

The National Electricity Rules (Rules) create a framework for acquiring and dispatching network support and control ancillary services (NSCAS). The key facets of this Rule are:

- that the NSCAS needs of the National Electricity Market will be defined in terms of power system security, reliability of supply and delivering market benefits, with reference to definitions and procedures to be developed by AEMO through the Rules consultation procedures;
- giving the transmission network service providers (TNSPs) the primary responsibility for meeting the NSCAS needs in the NEM;
- that AEMO, through its National Transmission Network Development Plan (NTNDP), would identify any gaps between the NSCAS needs of the NEM power system and the NSCAS that is anticipated to be acquired by the network service providers (NSPs), including the trigger date when the NSCAS gap arises and the NSCAS tender date when AEMO would need to act by if it considered it necessary to acquire the NSCAS;
- that AEMO would consult with the TNSPs to determine whether the NSCAS remains unmet and, in the case of NSCAS required for power system security or reliability of supply, seek tenders from NSCAS providers to meet this gap; and
- the costs for NSCAS acquired by AEMO should be recovered from Market Customers in benefiting regions on the basis of the regional benefit ancillary services procedures, while NSCAS costs incurred by the TNSPs are recovered from network users through the TNSPs' regulated transmission charges.

The Rule addresses a number of deficiencies in the current arrangements, which have lead to inefficient provision of NSCAS in the market. Currently NSCAS are defined in different ways in the Rules which creates ambiguity regarding the purpose and objectives of such services. In addition the responsibilities between AEMO and TNSPs for acquiring NSCAS are inconsistent and lack clarity.

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<sup>1</sup> AEMO's Final Determination was published on its website on 18 December 2009.

The Commission notes that AEMO would be faced with administration costs to implement these new provisions. However, it is expected that these costs would be outweighed by the likely benefits. The benefits include promoting the security and reliability of the electricity system, increasing the competition for acquiring NSCAS and improving the ability of the network service providers (NSPs) to efficiently deliver network services. Therefore, the Commission considers that the Rule will, or is likely, to contribute to the National Electricity Objective.

The Commission published its draft determination and draft Rule on 23 December 2010. Following analysis of the second round submissions, the Commission has maintained its recommendations on the framework for NSCAS and the Rule as Made includes more clarification on defining NSCAS and the arrangements for dispatching NSCAS.

The Commission has determined that the Rule as Made will commence on 5 April 2012. This date was chosen to provide AEMO sufficient time to put the new NSCAS arrangements into effect, including to:

- amend the existing non-market ancillary services (NMAS) tender guidelines and the guidelines for the dispatch of NSCAS to accommodate the Rule changes; and
- develop and publish the new NSCAS description document, the NSCAS quantity procedure and the regional benefit ancillary services procedures.

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# 1 Australian Energy Market Operator's Rule change request

## 1.1 The Rule change request

On 13 April 2010, the Australian Energy Market Operator (AEMO) (Rule Proponent) made a request to the Australian Energy Market Commission (AEMC or Commission) to make a rule regarding network support and control ancillary services (Rule Change Request). The Rule Change Request included proposed amendments to Chapters 2A, 3, 4, 5, 8, 10 and 11 of the National Electricity Rules (Rules).

## 1.2 Rule Change Request Rationale

Under the current Rules, Network Support and Control Services (NSCS) are services that are critical to maintaining the secure and reliable operation of the power system. They provide the capability to control the active or reactive power flow into or out of a transmission network in order to maintain that transmission network in a secure operating state, and maintain or increase its power transfer capability. The term encompasses services acquired by both:

- Transmission Network Service Providers (TNSPs), from their own assets (as network control services) or from other parties (as network support services); and
- AEMO, from registered participants (which are defined in the Rules as network control ancillary services).

In this Rule Change Request the Rule Proponent seeks to implement recommendations from the final determination of its review of NSCS (NSCS Review).<sup>2</sup> While the Rules required AEMO to review network control ancillary services (NCAS), in its Draft Scoping Paper for the NSCS Review the National Electricity Market Management Company (NEMMCO), as it was at the time, proposed extending the review from the services acquired by NEMMCO (i.e. NCAS) to include the broad suite of NSCS.

NEMMCO reasoned that given the inter-relationships between purposes and forms-of-service of the full suite of NSCS, a review of the arrangements for any individual service can only yield a robust outcome if all related services were considered at the same time.

The Proponents rationale for the Rule Change is set out in its Rule Change Request. The key points raised in the Rule Change Request are summarised as follows:

- the responsibilities for acquiring these services are inconsistent and lack clarity, as a result, TNSPs do not adequately plan to address the underlying requirement for such services through their own regulated investment process;

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<sup>2</sup> AEMO's Final Determination was published on its website on 18 December 2009.

- the definition and objectives of NCAS are too narrow such that the full range of benefits are excluded from consideration;
- there is no integrated national planning focus, therefore, optimisation of NCAS and investments in network augmentations are not encouraged;
- potential providers of NCAS are precluded from providing the service, resulting in less competition for service provision;
- AEMO is not provided with sufficient information about network support agreements and, as a result, its ability to achieve its power system security obligations is diminished; and
- costs are not recovered from those who receive the benefits of NCAS, therefore, locational market signals for efficient network service investment are muted.

### **1.3 Solution proposed by the Rule change Request**

The Rule Proponent proposed to resolve the issues discussed above by making a Rule that sought to:

- replace the definition of NCAS with network support and control ancillary services (NSCAS), which would be defined as services that control active or reactive flows to assist in maintaining a secure transmission network or to maintain or increase its power transfer capability;
- set out the objectives of NSCAS, which would be to:
  - maintain power system security and reliability in accordance with system security and reliability standards; and
  - maintain or increase power transfer capability so as to maximise the present value of net economic benefits for producers, consumers and transporters of electricity;
- clarify that TNSPs would have the primary responsibility for acquiring NSCAS;
- require AEMO to plan and publish its NSCAS requirements through the National Transmission Network Development Plan (NTNDP) process;
- require AEMO to tender for NSCAS when a NSCAS need has been identified in the NTNDP and has remained unmet for 18 months;
- allow a broader range of providers, including non-registered participants, to tender for the provision of NSCAS;
- require TNSPs to provide and update AEMO with relevant information on their NSCAS provided under Network Support Agreements; and

- allow AEMO to recover its NSCAS costs from Market Customers in benefiting regions in accordance with the proposed regional benefit ancillary services procedures.

#### 1.4 Relevant background

AEMO sought, in this Rule Change Request, to implement recommendations from its NSCS Review. AEMO (originally NEMMCO) was obliged under clause 3.1.4(a1)(4) of the Rules to conduct a review into the provision of NCAS. The review was required to include:

- a review of the responsibilities of AEMO (originally NEMMCO) and TNSPs for the provision of reactive power support;
- a review of the formulation of generic network constraint equations that depend on the provision of NCAS; and
- an assessment of the potential implications of markets for acquiring and dispatching NCAS.

The obligation to conduct a review on NCAS was mandated by amendments made in 2001 to the then National Electricity Code (the Code).<sup>3</sup> The amendments were a consequence of a review undertaken by NEMMCO on ancillary services arrangements in 1999.<sup>4</sup> NEMMCO's 1999 Ancillary Services Review identified that:

“At the moment the potential for competition in voltage control services is clouded by apparent Code inconsistencies that assign responsibilities to both the TNSPs and NEMMCO, and that relate to the different incentives that apply to TNSPs, distribution businesses and generators in respect to these services.<sup>5</sup>”

NEMMCO initiated the NSCS Review on 29 July 2008 with the release of an Issues and Options Discussion Paper.<sup>6</sup> NEMMCO waited until this time to initiate the review as it was to have regard to the outcomes of a National Electricity Code Administrator (NECA) review, which was never completed.<sup>7</sup> In addition, with the AEMC's agreement

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<sup>3</sup> Australian Competition & Consumer Commission (ACCC), *Applications for Authorisation, National Electricity Code, Ancillary Services Amendments*, 11 July 2001.

<sup>4</sup> Intelligent Energy Systems Pty Ltd, *Evaluation of Options for an Ancillary Services Market for the Australian Electricity Industry, A Project Commissioned by the NEMMCO Ancillary Services Reference Group, Final Report*, August 1999.

<sup>5</sup> Ibid, p. xv.

<sup>6</sup> NEMMCO, *Review of Network Support & Control Services: Issues & Options Discussion Paper*, 29 July 2008. Note, however, that NEMMCO published a draft and final scoping paper prior to the official commencement of the NSCS Review.

<sup>7</sup> The review was a requirement of the same ACCC authorisation that required the review of NCAS. The primary focus of that review was to be on frequency control ancillary services spot market trading. See: ACCC, *Applications for Authorisation, National Electricity Code, Ancillary Services Amendments*, 11 July 2001, pp. 57-58.

and, given it addressed similar issues, the NSCS Review was delayed until the AEMC's Congestion Management Review was completed.<sup>8</sup>

NSCS is not a defined term in the Rules. Therefore, for the purposes of its review, AEMO defined NSCS as services that are critical to maintaining the secure and reliable operation of the power system.<sup>9</sup>

While NCAS is considered as a subset of NSCS it effectively has the same capabilities as NSCS. The services that TNSPs acquire and deliver, and the outcomes they seek to achieve are, in many ways, difficult to distinguish from the services acquired and deployed by AEMO. However, under the Rules NCAS can only be acquired and dispatched by AEMO. For this reason, the generic term of NSCS has been used for these services that are provided by both TNSPs and AEMO. Conversely the term NCAS can only be applied to ancillary services acquired by AEMO in accordance with the Rules.

## **1.5 Commencement of Rule making process**

On 22 July 2010, the Commission published a notice under section 95 of the National Electricity Law (NEL) advising of its intention to commence the Rule change process and the first round of consultation in respect of the Rule Change Request. A consultation paper prepared by the Australian Energy Market Commission (AEMC) staff identifying specific issues or questions for consultation was also published with the Rule Change Request. Submissions closed on 3 September 2010.

The Commission received seven submissions on the Rule Change Request as part of the first round of consultation. They are available on the AEMC website<sup>10</sup>. A summary of the issues raised in submissions and the Commission's response to each issue is contained in Appendix A.

The Rule proponent requested that the Rule Change Request be subject to the fast-track Rule change process under section 96A(1)(a) of the NEL. The Commission decided not to fast-track the Rule Change Request.

## **1.6 Publication of draft Rule determination and Draft Rule**

On 23 December 2010 the Commission published a notice under section 99 of the NEL and a draft Rule determination in relation to the Rule Change Request (draft Rule determination). The draft Rule determination included a draft Rule (draft Rule).

Submissions on the draft Rule determination closed on 25 February 2011. The Commission received four submissions on the draft Rule determination, which are

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<sup>8</sup> AEMC, *Congestion Management Review - Final Report*, June 2008, p. 275.

<sup>9</sup> AEMO, *Review of Network Support & Control Services, Final Determination Report*, 18 December 2009, p.10.

<sup>10</sup> [www.aemc.gov.au](http://www.aemc.gov.au)

available on the AEMC website.<sup>11</sup> A summary of the issues raised in submissions, and the Commission's response to each issue, is contained in Appendix B.

## **1.7 Extensions of time**

The publication of the draft Rule determination was extended under section 107 of the NEL on two occasions. On 22 July 2010, the Commission published a notice under section 107 of the NEL advising it had extended the period of time for making:

- the draft Rule determination to 25 November 2010; and
- the final Rule determination to 17 March 2011.

On, 25 November 2010, the Commission published a further notice under section 107 of the NEL advising it had extended the period of time for making the draft Rule determination to 23 December 2010.

The final Rule determination and Rule as Made were published on 7 April 2011, without the need for a further extension of time.

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11 [www.aemc.gov.au](http://www.aemc.gov.au)

## **2 Final Rule Determination**

### **2.1 Commission's determination**

In accordance with section 102 of the NEL the Commission has made this final Rule determination in relation to the Rule proposed by AEMO. In accordance with section 103 of the NEL the Commission has determined to make, with amendments, the Rule proposed by the Rule proponent<sup>12</sup>.

The Commission's reasons for making this final Rule determination are set out in section 3.1.

The National Electricity Amendment (Network Support and Control Ancillary Services) Rule 2011 No 2 Rule as Made) is published with this final Rule determination. The Rule as Made commences on 5 April 2012. The Rule as Made is different from the Rule proposed by the Rule Proponent. Its key features are described in section 3.2.

The Commission's reasons for making this final Rule determination are set out in section 2.4.

### **2.2 Commission's considerations**

In assessing the Rule Change Request the following matters were material and relevant:

- the Commission's powers under the NEL to make the Rule;
- the Rule Change Request;
- the fact that there is no relevant Ministerial Council on Energy (MCE) Statement of Policy Principles;<sup>13</sup>
- the revenue and pricing principles under section 7A of the NEL;
- submissions received during first and second round of consultation; and
- the Commission's analysis as to the ways in which the proposed Rule will or is likely to, contribute to the achievement of the National Electricity Objective (NEO).

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<sup>12</sup> Under section 103 (3) of the NEL the Rule that is made in accordance with section 103(1) need not be the same as the draft of the proposed Rule to which a notice under section 95 relates or the draft of a Rule contained in a draft Rule determination.

<sup>13</sup> Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

## 2.3 Commission's power to make the Rule

The Commission is satisfied that the Rule as Made falls within the subject matter about which the Commission may make Rules. The Rule as Made falls within the matters set out in section 34 of the NEL as it relates to:

- the operation of the national electricity market;
- the operation of the national electricity system for the purposes of the safety, security and reliability of that system; and
- the activities of persons (including registered participants) participating in the NEM or involved in the operation of the national electricity system.

Further, the Rule as Made falls within the matters set out in schedule 1 to the NEL as it relates to:

- item 7 because it is concerned with the setting of prices for electricity and services purchased through the wholesale exchange operated and administered by AEMO; and
- item 11 because it relates to the operation of generating systems, transmission systems, distribution systems or other facilities.

## 2.4 Rule making test

Under section 88(1) of the NEL the Commission may only make a Rule if it is satisfied that the Rule will, or is likely to, contribute to the achievement of the NEO. This is the decision making framework that the Commission must apply.

The NEO is set out in section 7 of the NEL as follows:

“The objective of this Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- (a) price, quality, safety, reliability and security of supply of electricity; and
- (b) the reliability, safety and security of the national electricity system.”

For the Rule Change Request, noting that there are no relevant MCE Statement of Policy Principles, the Commission considers that the relevant aspect of the NEO is promoting the efficient investment in, and use of, electricity services and ensuring the reliability, safety and security of the national electricity system.<sup>14</sup>

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<sup>14</sup> Under section 88(2), for the purposes of section 88(1) the AEMC may give such weight to any aspect of the NEO as it considers appropriate in all the circumstances, having regard to any relevant MCE statement of policy principles.

The Commission is satisfied that the Rule as Made will, or is likely to, contribute to the achievement of the NEO. The benefits of the new arrangements include promoting:

- a national basis for planning that defines NSCAS needs using common definitions and procedures, and AEMO identifying gaps in the provision of NSCAS through the NTNDP;
- efficient investment in electricity services by giving TNSPs the opportunity to minimise their total costs of providing network services through acquiring NSCAS;
- greater transparency by requiring the NSPs to either meet the NSCAS gaps identified in the NTNDP or give reasons why these needs were not met;
- the security of the power system and reliability of supply by allowing AEMO to address any NSCAS gaps in the NSCAS acquired by the NSPs, where the gap relates to power system security or reliability of supply;
- efficient operation of electricity services by allowing NSPs to either dispatch NSCAS they acquire or to allow it to be dispatched by AEMO;
- competition for the provision of NSCAS by allowing AEMO to acquire NSCAS from NSPs and non-registered participants, in addition to the existing ability for market participants to provide NSCAS; and
- greater regulatory certainty by clarifying the roles and responsibilities of AEMO and the NSPs.

The Commission considers that these benefits provide greater role clarity, and more transparent and nationally focussed planning, which are likely to lead to more efficient investment in, and efficient operation of, electricity services for the long term interests of consumers, particularly with respect to price. Further the Commission considers that these benefits are very likely to exceed the additional administrative costs that will be incurred by AEMO.

Under section 91(8) of the NEL the Commission may only make a Rule that has effect with respect to an adoptive jurisdiction if satisfied that the proposed Rule is compatible with the proper performance of AEMO's declared network functions, which includes its capacity as a TNSP in Victoria. The Rule as Made is compatible with AEMO's declared network functions because it does not impact on AEMO's obligations associated with planning or providing shared transmission services in Victoria. For this reason, the Commission considers the Rule as Made is compatible with AEMO's declared network functions.

## **2.5 Other requirements under the NEL**

In applying the Rule making test in section 88 of the NEL, the Commission has also had regard to any relevant MCE Statements of Policy Principles as required under

section 33 of the NEL.<sup>15</sup> There are no MCE Statements of Policy Principles relevant to this Rule. In addition under section 88B of the NEL, the Commission must take into account the revenue and pricing principles in making a Rule for, or with respect to, any matter or thing specified in items 15 to 24 and 25 to 26J in Schedule 1 of the NEL. The Commission has taken into account the revenue and pricing principles in making this Rule determination as the Rule as Made relates to items 16(1) and 20 of Schedule 1 of the NEL. Some relevant aspects of the revenue and pricing principles relate to:

- providing service providers with efficient incentives in order to promote economic efficiency - which includes efficient investment in the system - with respect to the direct control network services being provided;
- providing a reasonable opportunity to service providers to recover efficient costs and ensuring that prices should allow for a return commensurate with the regulatory and commercial risks in providing the service; and
- having regard to the economic costs and risks of the potential for under and over investment of a transmission system with which a regulated network service provider provides direct control network services.

The Commission considers that the Rule as Made is consistent with the revenue and pricing principles as it encourages efficient investment in NSCAS and hence the transmission network, without negatively impacting the TNSPs' ability to recover efficient costs.

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<sup>15</sup> Under section 33 of the NEL the AEMC must have regard to any relevant MCE statement of policy principles in making a Rule.

### 3 Commission's reasons

The Commission has analysed the Rule Change Request and assessed the issues arising out of this Rule Change Request. For the reasons set out below, the Commission has determined that a Rule be made. Its analysis of the Rule proposed by the Rule Proponent is also set out below.

#### 3.1 Assessment

NSCAS provide the capability to control the active or reactive power flow into or out of a transmission network in order to maintain that transmission network in a secure operating state, and maintain or increase its power transfer capability. Therefore, potentially such services can significantly increase the secure power transfer capability of parts of a transmission network.<sup>16</sup> In the right circumstances, NSCAS can significantly increase the secure power transfer capability and do so at a much lower cost than the alternative of additional investment in transmission lines and transformers.

As identified by the proponent, there are a number of issues with the current arrangements for the acquiring and dispatching of NSCAS. Currently NSCAS are defined in different ways in the Rules which creates ambiguity regarding the purpose and objectives of such services. In addition the responsibilities between AEMO and TNSPs for acquiring NSCAS are inconsistent and lack clarity.<sup>17</sup>

Given this, there is potentially a gap between the amount of NSCAS that is acquired by TNSPs and the amount that AEMO considers is necessary. However while TNSPs and AEMO employ differing rationales for delivering or contracting NSCAS, and also acquire and deliver different forms of NSCAS, the outcomes they seek to achieve are in many ways indistinguishable.

The Rule as Made therefore clarifies the definition of NSCAS and the objectives of acquiring such services and also removes any uncertainty about the responsibilities between TNSPs and AEMO. In addition, the Rule as Made ensures that potential

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<sup>16</sup> The secure power transfer capability or secure operating limit of a transmission network is based on ensuring the power system will be in a satisfactory operating state at all levels of power transfer up to its secure operating limit, and would return to a satisfactory operating state following any credible contingency event. Some NSCAS can supply reactive power to ensure voltages remain within acceptable limits following contingencies, while other NSCAS can supply active power or trip load to ensure the post-contingent power transfers remain within their operating ratings.

<sup>17</sup> NSPs ensure appropriate levels of NSCS are delivered such that there is the capability to manage intra-regional network reliability at expected peak demand in an effort to meet "intra-regional reliability" obligations and procure and deliver NSCS as part of the most efficient package of measures to deliver network capability with net market benefit consistent with the RIT-T. While AEMO procures appropriate levels of NCAS such that there is the capability to ensure a system-wide secure and reliable network at all times as part of meeting the power system security and reliability standards under the Rules and may also procure NCAS to assist in maximising the value of spot market trading.

providers of NSCAS are not precluded from the procurement process and therefore promotes an efficient and competitive process.

The Rule as Made recognises that a nationally coordinated approach to the planning, acquisition and deployment of NSCAS has the potential to provide additional power transfer capability at significantly lower costs than alternative infrastructure investment and, therefore, also achieves significant market benefits.

### **3.2 Rule as Made**

The Rule as Made provides:

- for NSCAS to be defined as a service that controls active power or reactive power flows into or out of a transmission network to an NSCAS need as defined in the Rules. A NSCAS need is defined as NSCAS required to:
  - maintain power system security and reliability of supply of the transmission network in accordance with the power system security and reliability standards; and
  - maintain or increase the power transfer capability of that transmission network so as to maximise the present value of net economic benefit to all those who produce, consume or transport electricity in the market;
- for the TNSPs to have the primary responsibility for acquiring NSCAS in accordance with their existing obligations with respect to reliability and security of supply, and in order to deliver market benefits;
- that AEMO will be limited to acquiring NSCAS for system reliability and system security purposes, only when a TNSP has failed to do so;
- that AEMO will be required to publish its assessment of the need for NSCAS across the NEM in its NTNDP, including identifying gaps between the NSCAS needs and the NSCAS currently acquired or expected to be acquired;
- for a trigger date to be identified in the NTNDP for each expected gap in the available NSCAS. The trigger date identifies when AEMO anticipates that the gap in the available NSCAS will occur. There is no constraint placed on the trigger date, provided it is a date after the publication of the NTNDP;
- for a tender date to be identified in the NTNDP for each expected gap in the available NSCAS required to maintain power system security or reliability of supply. At the time of the tender date AEMO will be required to determine if it is going to acquire NSCAS to address system security or system reliability issues. AEMO will be required to publicly consult with TNSPs when making this decision;

- that AEMO is able to acquire NSCAS from persons other than registered participants and TNSPs will not be precluded from tendering with AEMO to provide NSCAS within their own regions;
- that all providers of NSCAS should be required to meet the requirements in the Rules, to the extent possible, and AEMO will consult on the obligations and standards to apply;
- that both TNSPs and distribution network service providers (DNSPs) be required to provide relevant detailed information on their NSCAS provided under network support agreements to AEMO. TNSPs and DNSPs will also be obliged to negotiate in good faith with AEMO on the form of the instructions they will provide to AEMO on how to dispatch the NSCAS;
- that AEMO amends (through the Rules consultation procedures) the existing:
  - NSCAS tender guidelines that AEMO will apply when it acquires NSCAS; and
  - guidelines for the dispatch of NSCAS within central dispatch and projected assessment of system adequacy (PASA) processes;
- that AEMO develops (through the Rules consultation procedures) and publish:
  - the NSCAS description document that describes each type of NSCAS;
  - the NSCAS quantity procedure that determines the location and quantity of each type of NSCAS; and
  - regional benefit ancillary services procedures in order to determine the beneficiaries of NSCAS it acquires;
- that the costs for NSCAS acquired by AEMO will be recovered from Market Customers in the benefiting regions on the basis of the proposed regional benefit ancillary services procedures; and
- NSCAS costs incurred separately by TNSPs are recovered from network users through the TNSPs' regulated transmission charges. Where a TNSP provides NSCAS through tendering to AEMO, the costs will be treated as non-regulated revenue.

The commencement date for the Rule as Made is 5 April 2012.

### **3.3 Changes to the Rule**

The Rule as Made differs from the Rule proposed by AEMO in the following ways:

- minor amendments to the definitions of NSCAS and NSCAS need in order to clarify how and when such services should be acquired and dispatched;

- limits the ability of AEMO to only acquire NSCAS for system security and reliability reasons. TNSPs have the sole responsibility for providing NSCAS which solely deliver market benefits;
- removes the 18 months timing after the publication of the relevant NTNDP constraint on the ability of AEMO to acquire NSCAS;
- adds an obligation on AEMO to consult on the obligations and standards that would form part of tender documents for NSCAS; and
- includes a provision that all providers of NSCAS be required to meet the requirements in the Rules, to the extent possible, and AEMO will consult on the obligations and standards to apply.

The following table provides a summary of the new arrangements for identifying NSCAS needs and gaps, acquiring NSCAS, dispatching NSCAS and the recovery of the costs of NSCAS.

### Summary of the arrangements for NSCAS

| NSCAS acquirer | NSCAS for Reliability and Security   | NSCAS for Market Benefits  |
|----------------|--|--|
| TNSP           | <ul style="list-style-type: none"> <li>• NSCAS need identified in NTNDP or by the TNSP's planning process</li> <li>• NSCAS acquired by TNSP</li> <li>• TNSP or AEMO can dispatch NSCAS</li> <li>• Cost recovered from network users of TNSP's network</li> </ul>               | <ul style="list-style-type: none"> <li>• NSCAS need identified in NTNDP or by the TNSP's planning process</li> <li>• NSCAS acquired by TNSP</li> <li>• TNSP or AEMO can dispatch NSCAS</li> <li>• Cost recovered from network users of TNSP's network</li> </ul>   |
| AEMO           | <ul style="list-style-type: none"> <li>• NSCAS gap identified in NTNDP</li> <li>• NSCAS acquired under Ancillary Services Agreements (if no action by TNSP)</li> <li>• AEMO can dispatch NSCAS</li> <li>• Cost recovered from market customers in benefiting region</li> </ul> | <ul style="list-style-type: none"> <li>• NSCAS gap identified in NTNDP</li> <li>• AEMO cannot acquire NSCAS purely for market benefits</li> <li>• AEMO can dispatch NSCAS (if contracted for power system security or reliability of supply)</li> <li>• Cost recovered from market customers in benefiting region</li> </ul> |

### 3.4 Stakeholder views

The Commission's assessment has taken into consideration issues raised in stakeholder submissions to the first and second round Rule change process. The issues raised in submissions are discussed in the following chapters and detailed summaries of the issues raised in the draft and final determinations, and responses and comments from the Commission, are outlined in Appendix A and Appendix B respectively.

### 3.5 Civil Penalties

The Rule as Made has the following minor implications in terms of Rules that are currently classified as civil penalty provisions under the National Electricity (South Australia) Regulations:

- clause 3.11.3(j) is deleted;
- clause 4.3.4(d) is expanded to specify the information that TNSPs must advise AEMO of in regard to any ancillary services or similar services provided under any connection agreement to which it is a party; and
- clauses 3.11.5(o), 4.9.3A(d) and 4.10.2(c) are amended to include all NSCAS providers, rather than being limited to registered participants.

The Commission does not propose to recommend to the MCE that any of the proposed amendments to the Rule as Made be classified as civil penalty provisions as the Rule relates to the procurement of network services. The nature of the provisions under Chapter 6A already provide incentives to ensure that TNSPs adhere to the requirements so that they would deliver services on an efficient basis.

The effect of Sections 2 and 48 of the NEL and Clause 5(1) of the Regulations is that subject to Section 68 of the NEL, the Australian Energy Regulator (AER) is unable to take action in regards to a breach of a civil penalty provision of the Rules against "any person" (but the AER is able to take action against a "relevant participant" as defined in the NEL, which includes a registered participant under the Regulations). However, the Commission anticipates that major NSCAS as acquired by AEMO would be provided by registered participants. Further, the Commission anticipates that AEMO would have contractual remedies open to it in the event that a NEMAS provider as a "person" has not complied with the terms of its ancillary services agreement.

## 4 Commission's analytical framework

This chapter describes the analytical framework that the Commission has applied to assess the Rule Change Request in accordance with the requirements set out in the NEL (and explained in Chapter 2).

In assessing any Rule Change Request against the NEL criteria the first step is to consider the counterfactual arrangements against which the Rule change is being compared. In the present case the counterfactual arrangements are:

- the current ambiguity of the arrangements for AEMO and the TNSPs for acquiring and dispatching ancillary services for network support and network control;
- only allowing AEMO to acquire NCAS from Registered Participants; and
- not requiring the NSP to provide AEMO with detailed information on the non-market ancillary services that they have acquired.

In assessing this Rule Change Request, the Commission has considered the following issues:

- **signals for efficient investment** - whether the arrangements improve the transparency and regulatory certainty of the framework for planning and acquiring NSCAS requirements to meet the NEM power system needs;
- **efficient use of electricity services** - whether the Rule would be likely to improve the benefits of the existing network by better informing TNSPs decisions to acquire NSCAS as an alternative to network augmentations;
- **barriers to entry** - whether the Rule is likely to affect barriers to potential providers of NSCAS; and
- **quality, reliability and security of supply** - whether the arrangements continue to assist AEMO and the TNSPs to maintain power security and reliability of supply.

Chapters 5 to 9 address the following key issues that are relevant to the Commission's assessment of this Rule Change Request:

- definition and objective of NSCAS;
- planning and acquiring NSCAS;
- provision of NSCAS by AEMO;
- dispatching NSCAS; and
- funding and cost recovery of NSCAS.

Chapter 10 addresses the commencement of the Rule.

The Commission has focused on this set of issues because they related to the efficient investment in the provision of network services, the efficient use of the transmission network and competition for the provision of NSCAS.

## 5 Definition and objective of NSCAS

NSCAS are acquired and delivered by either TNSPs or AEMO for the purpose of managing network flows in order to either ensure the secure and reliable operation of the power system, or to increase power flow capability in to or out of the network for economic benefit. This chapter addresses how this category of services should be defined in the Rules and what the objective of such services should be. Clarifying the definition and objective of NSCAS would provide clearer direction for acquiring and dispatching such services.

### 5.1 Rule Change proponent's view

The existing definition of NCAS is as follows:<sup>18</sup>

“A service identified in clause 3.11.4(a) which provides AEMO with a capability to control the real or reactive power flow into or out of a transmission network in order to:

- (a) maintain the transmission network within its current, voltage, or stability limits following a credible contingency event; or
- (b) enhance the value of spot market trading in conjunction with the central dispatch process.”

Under clause 3.11.4(b) AEMO must develop and publish a procedure for determining the quantities of each kind of NCAS required for AEMO:

1. to achieve the power system and security and reliability standards; and
2. to enhance, where practicable, network transfer capability whilst still maintaining a secure operating state when, in AEMO's reasonable opinion, the resultant expected increase in NCAS costs will not exceed the resultant expected increase in benefits of trade from the spot market.

AEMO contended that the service objective of NCAS contained in this clause, and in the definition, is too narrow. This is because the spot market trading benefit objective does not cover the full range of benefits that TNSPs would consider when undertaking the regulatory investment test for transmission (RIT-T).<sup>19</sup> AEMO also contended that the existing arrangements create ambiguity due to there being multiple objectives. AEMO stated that the objective of NCAS is defined in different ways in chapter 10, clause 3.11.4(b) and, indirectly, in clauses 3.11.5(a) and 3.11.6(a)(1) of the Rules.<sup>20</sup>

AEMO proposed to introduce a new defined term 'NSCAS' to replace the current definition for NCAS. NSCAS is described as a service that controls active power or

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<sup>18</sup> Definition of Network Control Ancillary Services, Chapter 10 of the Rules.

<sup>19</sup> AEMO Rule Change Request, p. 14.

<sup>20</sup> Ibid.

reactive power flows in to or out of the transmission network to address a NSCAS need. AEMO also proposed a new objective for NSCAS, referred to as a 'NSCAS need'. A NSCAS need is defined as NSCAS required to:

- maintain power system security and reliability of supply of the transmission network in accordance with the power system security and reliability standards; and
- maintain or increase the power transfer capability of that transmission network so as to maximise the present value of net economic benefit to all those who produce, consume or transport electricity in the market.

## **5.2 Stakeholder views**

### **5.2.1 First round of consultation**

Stakeholders generally supported the definition and objective proposed for NSCAS.

However, Grid Australia was concerned that the definition may be unintentionally broad. For example, Grid Australia suggested that the definition could be taken to mean something as simple as a circuit breaker or a change to a protection setting.<sup>21</sup>

Hydro Tasmania and Transend considered the definition of NSCAS should include the provision of system inertia.<sup>22</sup> This is because additional system inertia reduces the need for some frequency control ancillary services and, hence, can be regarded as a substitute for such services.

### **5.2.2 Second round of consultation**

Grid Australia was concerned that the draft Rule was unclear how the scope of NSCAS might be extended to include additional services such as system inertia.<sup>23</sup>

## **5.3 Commission's analysis**

The definition and objective for NSCAS proposed by AEMO is broader than the existing definition and objective of NCAS. The existing arrangements appear to be focussed more towards the real-time application of network support and control services. This is because they relate to spot prices and maintaining current, voltage and stability limits following a credible contingency. However, the definition and objective focus more on longer term objectives to be more consistent with the transmission planning framework.

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21 Grid Australia submission to the first round consultation, 3 September 2010, p. 11.

22 Hydro Tasmania submission to the first round of consultation, 2 September 2010, p. 2; Transend submission to the first round of consultation, 2 September 2010, p. 2.

23 Grid Australia submission to the second round consultation, 3 September 2010, p. 1.

The definition and objective of NSCAS also need to be consistent with the manner that TNSPs plan and operate their networks. Therefore, the definition and objective of NSCAS are expressed in terms of market benefits, rather than spot market trading benefits, in order to better align with the investment test used by the TNSPs to assess network investments. That is, the spot market trading benefit objective does not cover the full range of benefits that TNSPs would consider when undertaking the RIT-T.

The Commission considers that the definition and objective of NSCAS should be in terms of an NSCAS need. In principle, the definition proposed by AEMO achieves this aim. In addition, this definition would be expected to encompass any activity or service which provides system inertia.<sup>24</sup>

The definition of NSCAS proposed by AEMO includes two elements. The first relates to what the service is. The second relates to how the service is used. However, the proposed description of a 'NSCAS need' also includes a description of how the NSCAS should be used. The Commission agrees that it is important that the objective of NSCAS encompasses both managing system security and reliability, as well as delivering economic benefits, but considers that having the use of the service described in two places may create conflict or uncertainty between the two. Where this is the case, there may be implications for regulatory certainty and clarity for market participants. The Commission considers that the definition proposed by AEMO, with some amendments and clarifications, would be appropriate.

The Rule also needs to distinguish between a 'NSCAS need' and a 'NSCAS gap'. A NSCAS need defines the NSCAS requirements of the power system while a NSCAS gap is a NSCAS need that is not expected to be met by the time the need arises. As discussed in chapter 6, AEMO will identify any gap between the NSCAS that is needed by the power system and the NSCAS that is acquired by the TNSPs.

The Commission also considers that the definition of NSCAS should be limited to the ancillary services that are defined on a nationally consistent basis. That is, ancillary services that are determined with reference to the NSCAS description document and the NSCAS quantity procedure, which are to be developed by AEMO through the Rules consultation procedure.

The Commission also considers that the definition of NSCAS should exclude any other non-market ancillary services that may be acquired by TNSPs to address other technical requirements and regulatory instruments. Such services would be acquired under connection agreements or network support agreements and should be reported on separately.

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<sup>24</sup> AEMO monitors the adequacy of power system security across the NEM through its annual review of power system adequacy (PSA), which includes scenarios that assume greater amounts of low inertia generation, to identify whether there are material issues with how system inertia is provided. The 2010 PSA's assessment of the Victorian and South Australian regions found that the frequency operating standards would be met under all scenarios with some possibility of automatic under-frequency load shedding. For the Tasmanian region, which also has a significant amount of wind generation, analysis was based on studies taken from the AEMC Reliability Panel's review of

The Commission considers that the definition of NSCAS provided in the Rule is sufficiently broad to include system inertia to the extent that additional system inertia may increase the ability of the network to transfer active or reactive power. The Commission notes that AEMO is presently monitoring this issue and, in the future, may propose more efficient ways for inertia to be provided than through network support agreements.

## **5.4 Conclusion**

The Commission concludes that AEMO's proposed definition should be adopted with only minor amendments.

NSCAS should be defined as a service that controls active power or reactive power flows into or out of a transmission network to address a NSCAS need. The objective of NSCAS (an NSCAS need) is defined as the location and quantities of each type of NSCAS required to:

- maintain power system security and reliability of supply of the transmission network in accordance with the power system security and reliability standards; and
- maintain or increase the power transfer capability of that transmission network so as to maximise the present value of net economic benefit to all those who produce, consume or transport electricity in the market.

The types, location and quantity of NSCAS are to be determined with reference to the NSCAS description document and the NSCAS quantity procedure, which are to be developed by AEMO through the Rules consultation procedure. Other non-market ancillary services that may be acquired by TNSPs under connection agreements or network support agreements in order to address other technical requirements and regulatory instruments are excluded from the definition of NSCAS.

A NSCAS gap is defined as any NSCAS need that is not met for a planning horizon of at least 5 years from the publication of the AEMO NTNDP.

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the Tasmanian frequency operating standards, which found that reduced inertia was not expected to cause frequency control issues for the period ended June 2012.

## 6 Planning and Acquiring NSCAS

This chapter sets out the Commission's considerations in relation to the planning and acquiring of NSCAS. As explained above, NSCAS has two purposes: either to manage system security and reliability, or to deliver economic benefits to the market. We have separated our assessment on the appropriate arrangements for the planning and acquiring of NSCAS between:

- NSCAS for system reliability and security; and
- NSCAS for economic benefits.

### 6.1 Rule Change proponent's view

AEMO proposed that TNSPs would have the primary responsibility for acquiring NSCAS. AEMO would have an obligation to plan the national grid requirement for NSCAS as part of its National Transmission Planner (NTP) functions, and to report on that level for the long term in its NTNDP. Therefore the need for NSCAS would be identified in the NTNDP.

Under the proposed Rule, AEMO would only acquire NSCAS when a NSCAS need had been identified in the NTNDP and remained unmet for 18 months (i.e., the relevant TNSP has not taken action to acquire or develop the required ancillary service to address the identified NSCAS need). AEMO proposed that its role for acquiring NSCAS would cover both NSCAS for power system security and reliability of supply, and NSCAS for economic benefits.

AEMO proposed these planning and acquiring arrangements because it considers that, under the existing arrangements, the obligations to acquire NCAS are unclear and the relative responsibilities between AEMO and the TNSPs uncertain. It considers that this leads to TNSPs acquiring or supplying less ancillary services than is required.<sup>25</sup> In addition, AEMO considered that the existing arrangements lack an integrated national planning focus.<sup>26</sup>

#### 6.1.1 NSCAS for system security

TNSPs have planning and operating obligations to ensure security of supply and that the network is robust to credible contingencies.<sup>27</sup> These obligations and standards are included in various jurisdictional planning obligations, Rule obligations and licence conditions.

Where TNSPs' network capability obligations are relevant, the level of NSCAS acquired or delivered by TNSPs will depend on the TNSPs' interpretation of the

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<sup>25</sup> AEMO Rule Change Request, p. 18.

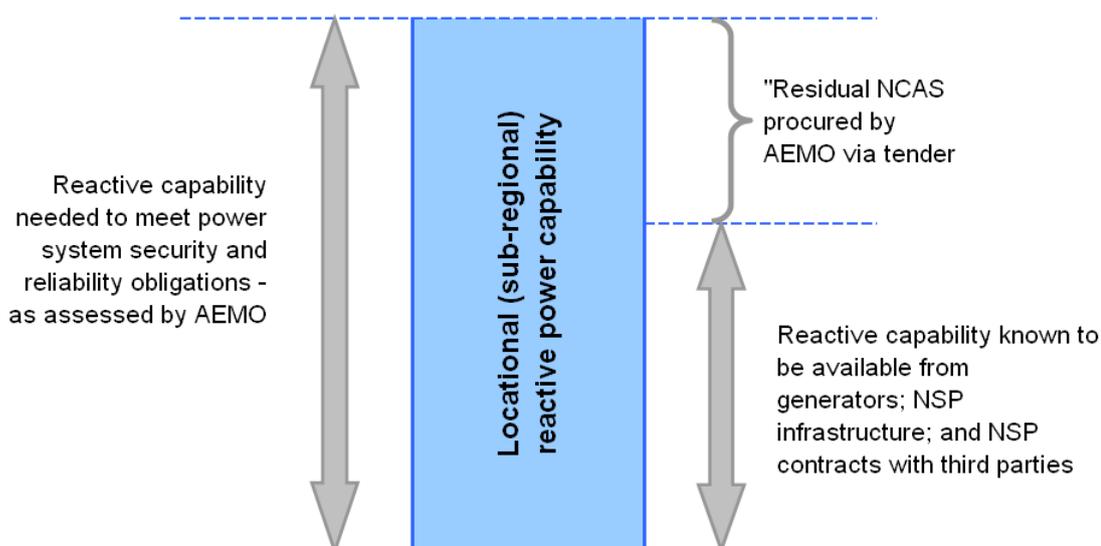
<sup>26</sup> Ibid.

<sup>27</sup> Schedules 5.1 and 5.1a of the Rules.

applicable instrument(s) and the mix of infrastructure and services by which TNSPs meet the relevant standards. Subject to funding restrictions established via regulatory resets, there is a degree of flexibility with respect to the mode by which TNSPs will choose to deliver on network obligations. As a consequence of these arrangements, TNSPs already provide a base level of network control services for security of supply reasons.

AEMO has obligations to maintain a secure and reliable system.<sup>28</sup> This has meant that AEMO will acquire NCAS when it identifies a gap between its assessment of the NCAS required to meet its standards and objectives, and the base level of network control services guaranteed to be provided by TNSPs. In doing so, AEMO assumes that all registered participants will meet their registered performance requirements and TNSPs will meet their network performance standards unless otherwise advised.<sup>29</sup> The figure below illustrates the relationship between NSCS acquired by TNSPs and AEMO.

**Figure 6.1 AEMO's reactive power capability acquiring decision**



AEMO contended that one of the reasons a gap exists between what TNSPs acquire and what AEMO deems as necessary for system security reasons is that TNSPs may believe only AEMO is permitted to acquire NCAS.<sup>30</sup> As a result of this, AEMO contends that TNSPs do not plan to address the underlying NCAS requirement through their own regulated investment process.<sup>31</sup>

AEMO proposed to overcome the problem of TNSPs acquiring insufficient NSCS by clarifying that both TNSPs and AEMO are able to acquire NSCAS. In addition, AEMO

<sup>28</sup> Clause 4.3.1(k) of the Rules.

<sup>29</sup> NEMMCO, *Review of Network Support & Control Services: Issues & Options Discussion Paper*, 29 July 2008, p. 33.

<sup>30</sup> AEMO Rule Change Request, p. 18.

<sup>31</sup> AEMO also cites that different standards between TNSPs and AEMO may be a factor. However, this was considered outside the scope of the NSCS Review.

has proposed that its assessment of the necessary level of NSCAS for the national network is planned and defined through the NTNDP. AEMO stated that its NCAS planning arrangements are not currently integrated with the NTP function, which does not encourage optimisation of NCAS with investments in network augmentations or replacements that are typically of a longer-term nature.<sup>32</sup>

Under the proposed framework AEMO's ability to tender for NSCAS is linked to the planning framework. A 'NSCAS need' must be identified in the NTNDP and remain unmet for a period of 18 months from its first identification, before AEMO can tender for the service.

### 6.1.2 NSCAS for economic benefit

TNSPs do not have specific obligations to undertake projects for market benefits. Instead, TNSPs will acquire network support services on the basis of the incentives they face in the economic regulation framework and their ability to recover the costs of such services under Chapter 6A of Rules. For instance, a service incentive scheme applies under the Rules which is designed to encourage TNSPs to provide greater reliability of the transmission system at times when transmission network users place greatest value on the reliability of the transmission system. This incentive scheme also seeks to provide incentives for TNSPs to improve and maintain the reliability of those elements of the transmission system that are most important to determining spot prices.<sup>33</sup> In addition, TNSPs are required to consider market benefits when undertaking the RIT-T.<sup>34</sup>

AEMO has obligations with respect to increasing the benefits of trade from the spot market. With respect to NCAS, AEMO is required, where practical, to enhance network transfer capability whilst still maintaining a secure operating state. Therefore a NCAS need exists when, in AEMO's reasonable opinion, the resultant expected increase in network control ancillary service costs will not exceed the resultant expected increase in benefits of trade from the spot market.<sup>35</sup> In addition, AEMO noted that the NMAS Operating Procedure states that, with respect to network loading control, if the market benefit exceeds the NCAS enabling cost then the service should be enabled.<sup>36</sup>

AEMO proposed that if a TNSP failed to invest in NSCAS which maximises the present value of net economic benefits, AEMO would then be required to acquire this network support service 18 months after the NSCAS need was first identified in the NTNDP.

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<sup>32</sup> This issue is exacerbated as AEMO's NMAS tendering guidelines for NCAS only allow for an NCAS assessment once every three years with a three year outlook, and NCAS is contracted for immediate delivery with no lead-time to construct facilities.

<sup>33</sup> Clause 6A.7.4(b) of the Rules.

<sup>34</sup> Clause 5.6.5B(b) of the Rules.

<sup>35</sup> Clause 3.11.4(b) of the Rules.

<sup>36</sup> AEMO, *Operating Procedure, Non-Market Ancillary Services*, 1 July 2009, p. 9.

## 6.2 Stakeholder views

### 6.2.1 First round of consultation

Stakeholders generally agreed that identifying the need for NSCAS in the NTNDP would be beneficial.

However, Alinta Energy Limited (AEL),<sup>37</sup> Hydro Tasmania<sup>38</sup> and the National Generators Forum (NGF)<sup>39</sup> were concerned that the provision of NSCAS may not be optimal if it is planned and acquired by TNSPs. The efficient provision of NSCAS in one region will enhance transfer capacity to an adjacent region, to the benefit of Market Customers in the importing region. Therefore, they considered that the responsibility for enhancing inter-regional transfer should be clarified.

In addition, the NGF considered that the proposed arrangements rely on AEMO's NTNDP meeting all relevant information requirements for NSCAS planning and acquiring, and that the RIT-T is applied in an unbiased way.<sup>40</sup>

Stakeholders also noted that both the NTNDP and the application of the RIT-T were untested.<sup>41</sup>

Some stakeholders were concerned whether the roles and responsibilities have been appropriately allocated. Grid Australia considered that the TNSPs should be the sole provider of NSCAS and that AEMO should not acquire NSCAS even as a last resort.<sup>42</sup> Grid Australia considered the AEMC's Last Resort Planning Power and the AEMO's power of direction provide sufficient safety nets.<sup>43</sup>

AEL and the NGF were concerned that no one has an obligation to undertake market benefits projects and the NGF considered AEMO should have this function.<sup>44</sup>

AEL was concerned with the 18 month delay between AEMO identifying the need for NSCAS (to allow TNSPs to acquire the NSCAS) and when AEMO acquires the NSCAS. AEL was concerned that this may mean that the reliability and security of the power system may be compromised in the interim.<sup>45</sup>

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<sup>37</sup> Alinta Energy Limited submission to the first round of consultation, 3 September 2010, p. 1.

<sup>38</sup> Hydro Tasmania submission to the first round of consultation, 2 September 2010, p. 3.

<sup>39</sup> NGF submission to the first round of consultation, 3 September 2010, p. 1.

<sup>40</sup> NGF submission to the first round of consultation, 3 September 2010, p. 1. & p.3.

<sup>41</sup> For example, NGF submission p. 5 and Alinta Energy Limited submission p. 2.

<sup>42</sup> Grid Australia submission to the first round consultation, 3 September 2010, p. 1.

<sup>43</sup> Grid Australia submission to the first round consultation, 3 September 2010, p. 9.

<sup>44</sup> Alinta Energy Limited submission to the first round of consultation, 3 September 2010, p. 3; NGF submission to the first round of consultation, 3 September 2010, p. 5.

<sup>45</sup> Alinta Energy Limited submission to the first round of consultation, 3 September 2010, p. 2.

## 6.2.2 Second round of consultation

The NGF<sup>46</sup> and Snowy Hydro<sup>47</sup> considered that the TNSPs do not have the necessary market experience to either acquire NSCAS for market benefits, or to dispatch that NSCAS in real-time in order to deliver those benefits. Further, the NGF<sup>48</sup> and Snowy Hydro<sup>49</sup> were concerned the TNSPs may be biased towards building their own assets rather than acquiring NSCAS to meet a system need. They were also concerned that the RIT-T is largely untested and may offer too much discretion to the TNSPs.

The NGF<sup>50</sup> was also concerned that under the proposed arrangements, no entity has an obligation to acquire NSCAS in order to deliver market benefits.

## 6.3 Commission's analysis

The Commission considers that the TNSPs should be the primary providers of NSCAS as the planning standards applied to the TNSPs and the security of supply arrangements in the Rules already require TNSPs to provide NSCAS.

The delivery of network capability can be accomplished with a variety, and combination, of technologies. Most of the requirements for NSCAS are highly locationally specific and, by varying the level of real or reactive power at different locations in the network or by operating load control facilities, the level of network congestion can be altered in ways that either reduce or increase the dispatch cost on the spot market for energy.

The mix of assets and form of NSCAS a TNSP supplies with its own infrastructure, or acquires via contract with third parties, will be a function of the relevant standards associated with preventing or managing congestion occurring in a TNSP's network and the outcomes of testing available options under the RIT-T.

Since NSCAS are both a necessary complement to network assets and also a partial substitute for them, the Commission considers that there is merit in ensuring that TNSPs have full control of the planning and acquiring of NSCAS in order to deliver a defined network service at minimum cost. It is important that a TNSP is able to take a complete holistic view of how best to plan its network to both meet the required standards and deliver services that maximise economic benefits, where it is efficient to do so. Therefore it would be most effective if TNSPs continue to be the primary providers of NSCAS as part of their responsibility to deliver network services.

The Commission does, however, consider that a safety net is desirable to ensure that sufficient NSCAS is acquired such that system reliability and security can be

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<sup>46</sup> NGF submission to the second round of consultation, 25 February 2011, p. 2.

<sup>47</sup> Snowy Hydro submission to the second round of consultation, 25 February 2011, p. 1 & 2.

<sup>48</sup> NGF submission to the second round of consultation, 25 February 2011, p. 6.

<sup>49</sup> Snowy Hydro submission to the second round of consultation, 25 February 2011, p. 1.

<sup>50</sup> NGF submission to the second round of consultation, 25 February 2011, p. 2, 3 and 5.

maintained. It agrees with the proponent and stakeholders that the current arrangements are confusing and do not promote optimal delivery of such ancillary services. Therefore, the Commission considers that AEMO should be able to acquire NSCAS to maintain system reliability and system security in the event that insufficient NSCAS is acquired by TNSPs. This may be necessary if the planning standards and the security of supply arrangements applied to TNSPs do not provide the appropriate incentives to acquire sufficient NSCAS. It could also be necessary if there are differences in the system security and reliability standards between AEMO and TNSPs (or even differences in the interpretation of such standards).

Given this consideration, the question becomes what should be the appropriate arrangements to trigger AEMO's role in providing safety net provision of NSCAS. The Commission consider that the following two amendments to AEMO's proposed arrangements would better promote the NEO:

- limit AEMO's scope to acquire NSCAS to ensuring the availability of appropriate levels of NSCAS necessary to achieve the power system security and reliability standards, consistent with its existing functions and obligations. Hence AEMO would have no power to acquire NSCAS solely for economic benefits purposes; and
- remove the constraint that AEMO can only step in and acquire NSCAS after a period of 18 months after the need had been identified in the NTNDP. AEMO should be able to acquire NSCAS at any time where it considers that the identified need will remain unmet and, in the absence of doing so, the power system could experience either a security or reliability problem; and AEMO considers there is no prospect that a TNSP would take action to address that gap.

The Rules already include obligations and incentives for TNSPs to develop a secure and reliable network, and allow them to enter into network support agreements for non-network options. While AEMO's responsibility regarding system security is clear, its responsibility and role in delivering wider market benefits is less so. To date, AEMO's role in terms of economic benefits from the network has been limited to minimising spot prices.<sup>51</sup> Allowing AEMO to acquire network support services for market benefits across the NEM is potentially a broader role. It also potentially shifts the accountability for the performance of the network, at least in the context of network support services, away from TNSPs and towards AEMO.

When the decision to establish a NTP was made, the Council of Australian Governments (COAG) agreed that under the new transmission planning arrangements, accountability for jurisdictional transmission investment, operation and performance will remain with the TNSPs.<sup>52</sup> Establishing a role for AEMO to acquire NSCAS which delivers market benefits (which would be wider than its current role

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<sup>51</sup> We note, however, AEMO has a role with respect to the Victorian transmission system where it is the planner and acquirer of network services. In this context, AEMO has a role in considering market benefits projects for network planning purposes.

<sup>52</sup> See MCE Terms of Reference to the AEMC for the National Transmission Planning Arrangements Review, 3 July 2007.

with respect to benefits of spot market trading) may remove some accountability from TNSPs.

The NTNDP has been developed as a transparent, informative planning tool to assist TNSPs in planning their networks over the long term in a manner consistent with promoting the efficiency of the national energy market and also to improve stakeholders' understanding of future transmission constraints and the possible planning options. Expanding the NTNDP to be used in a way which determines the required level of investment and then mandating parties to deliver that prescribed level is not consistent with the purpose of the NTNDP. The NTNDP is a planning guide and it should be possible for TNSPs and AEMO to employ more or less NSCAS (than that identified in the NTNDP) where it is efficient to do so.

Therefore, the purpose of NSCAS Rules should be to identify when AEMO needs to intervene in the market, that is, when the reliability or security of the system is at risk. Thus AEMO's role in acquiring NSCAS should be in providing a safety net focussed on power system security and reliability of supply. In coming to this view the Commission considered the proposed arrangements for NSCAS in light of the arrangements that already apply for network planning.

The Commission also considers that the 18 month time frame proposed by AEMO is relatively inflexible. There is a possibility that this constraint may limit AEMO's ability to achieve its security of supply obligations as it would be unable to acquire NSCAS even if it considered that TNSPs were unlikely to address the NSCAS need during that period. Also it is possible that circumstances change or better information becomes available which removes the rationale for the considered initial need. In such situations, it would be inefficient if AEMO remained obliged to acquire NSCAS.

For these reasons, the 18 month time frame should be removed and AEMO should have the ability to:

- identify in the NTNDP the date by which a gap in the NSCAS needs materialise (NSCAS trigger date) for a planning horizon of at least 5 years from the beginning of the year in which the NTNDP applies;
- identify in the NTNDP the earliest date that AEMO would act to acquire NSCAS to meet a NSCAS need (NSCAS tender date) related to power system security or reliability of supply, being any date after the publication of the NTNDP; and
- publicly consult with the TNSPs to confirm that a gap exists and, where a gap exists, to acquire NSCAS when a system security or reliability issue needs to be addressed.

In addition, AEMO should also be required to acquire any NSCAS on a cost effective basis.

AEMO will only be able to acquire NSCAS in order to maintain power system security or reliability of supply. However, the Commission considers that AEMO should be

able to dispatch such NSCAS to deliver net economic benefits, in addition to the purpose for which it has been acquired. This is discussed further in chapter 8.

The Commission considers that these amendments:

- maintain the framework of TNSPs being primarily responsible for network services and the NTP providing strategic long term planning with an national focus; and
- provide an appropriate safety net to ensure system security and reliability are maintained by enabling AEMO to acquire NSCAS more quickly when it is necessary to do so.

Some stakeholders raised concerns that TNSPs may not be sufficiently incentivised to provide NSCAS which deliver market benefits nor plan their networks on a national basis. The Commission notes that the RIT-T has been developed to ensure that TNSPs take into account market benefits and to have regard to national impacts of their proposed investments.

The proposed planning of NSCAS needs by AEMO in the NTNDP will also ensure that TNSPs will have information about NSCAS needs outside of their immediate network boundaries. The Commission also notes that it is currently conducting a Transmission Framework Review which will assess the wider framework of how transmission services are provided in the NEM including the appropriate incentives for TNSPs.<sup>53</sup>

The Commission considers that the transparency of the arrangements for NSCAS will be improved by requiring each TNSP:

- to report to AEMO and in its Annual Planning Report on how it will meet, or why it decided not to meet, the gap in NSCAS identified by AEMO in the NTNDP; and
- to provide a summary of the current level of NSCAS capability that can be provided in its network.

The Commission also considers that the TNSPs should also respond to questions that it has on the reasons for not meeting an NSCAS gap. This would inform the AEMC when discharging its functions including when it considers its Last Resort Planning Power.

## **6.4 Conclusion**

The Commission concludes that:

- TNSPs will bear the primary responsibility for acquiring NSCAS in accordance with their existing obligations with respect to reliability and security of supply;

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<sup>53</sup> AEMC Transmission Framework Review, Issues Paper, 18 August 2010.

- AEMO will be limited to acquiring NSCAS for system reliability and system security purposes as a last resort option, that is, when a TNSP has failed to do so;
- AEMO would be required to identify in its NTNDP:
  - where there is a gap between the NSCAS needs of the power system and the anticipated NSCAS acquired by the TNSPs (NSCAS gap);
  - the date by which the NSCAS gap is anticipated to materialise (NSCAS trigger date); and
  - the earliest date that AEMO would act to acquire NSCAS to meet a NSCAS gap, where the NSCAS gap relates to a power system security or reliability of supply need (NSCAS tender date); and
- TNSPs would be obliged each year in their Annual Planning Report to both provide a summary of the current level of NSCAS capability that can be provided in its network; and indicate how they intend to address, or not address, any relevant NSCAS need as identified in the most recent NTNDP. In addition, where a TNSP does not address a NSCAS need that is identified in the NTNDP, it would also be required to respond to any questions that the AEMC has on its reasons.

## 7 Provision of NSCAS by AEMO

This chapter sets out the assessment of the issues relating to how NSCAS should be acquired by AEMO and the parties that may provide such services. The processes for the TNSPs to acquire NSCAS are not considered.

### 7.1 Rule Change proponent's view

Under the existing arrangements only registered participants can tender to AEMO to provide NCAS.<sup>54</sup> The arrangements also exclude TNSPs from tendering to AEMO for reactive power ancillary services as a consequence of the technical specifications in AEMO's NCAS description.<sup>55</sup>

AEMO's choices when acquiring NCAS is limited because of:

- Clause 3.11.5(a) of the Rules that states “ ... AEMO must call for offers from persons who are in a position to provide the non-market ancillary service so as to have the required effect at a connection to a transmission network in an invitation to tender”;
- Clause 3.11.5(j) of the Rules that states: “ ... AEMO must not acquire non-market ancillary services from any person who is not a registered participant”; and
- the description of reactive power ancillary service<sup>56</sup> in the AEMO procedures for determining quantities of network control ancillary services, which is qualified as: “ excluding such capability within a transmission or distribution system” which excludes TNSPs from tendering for 'residual' NCAS to AEMO.

Therefore, through the application of these provisions, AEMO can only acquire NCAS from registered participants who are neither transmission network service providers (NSPs) nor distribution NSPs. This would mean that provision of NCAS in the form of reactive power capability is effectively limited to:

- registered generators operating in generation mode;
- registered generators operating in synchronous condenser mode; and
- market network service providers (MNSPs) providing DC link voltage control.

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<sup>54</sup> 3.11.5(j) of the Rules.

<sup>55</sup> AEMO, *Network Control Ancillary Service Description*, July 2009.

<sup>56</sup> Reactive power ancillary service is the capability to supply reactive power to, or absorb reactive power from, the transmission network in order to maintain the transmission network within its voltage and stability limits following a credible contingency event but excluding such capability within a transmission or distribution system or as a condition of connection

AEMO considers that widening the range of service providers would in many cases encourage greater competition and reduce the price of the service.<sup>57</sup> AEMO has, therefore, proposed that it be able to acquire NSCAS from persons other than registered participants. In addition, AEMO has proposed that it will address procedural issues, such as the exclusion of TNSPs tendering for reactive power support, in consequential amendments to relevant procedures which support the application of the Rules.

## 7.2 Stakeholder views

### 7.2.1 First round of consultation

AEL<sup>58</sup> and Hydro Tasmania<sup>59</sup> considered that the TNSPs should be prohibited from tendering to AEMO to provide NSCAS within their own regions. The NGF was concerned that a TNSP could effectively game the process by deciding not to include the service as part of its regulatory determination, but later to tender to AEMO to provide the service.<sup>60</sup> However, the NGF considered that once a TNSP makes a decision to competitively tender to provide NSCAS then that relevant service should remain outside of the TNSP's Regulatory Asset Base (RAB) for the life of the asset.<sup>61</sup>

The AER considered the change to allow TNSPs to compete against registered participants would promote efficient outcomes as it permits AEMO to consider a broader range of options for meeting a NSCAS need.<sup>62</sup> The AER noted that the potential risk of TNSPs' double dipping through their revenue recovery processes was only possible in limited circumstances.<sup>63</sup> Grid Australia considered that this risk could be managed through guidelines.<sup>64</sup>

Grid Australia<sup>65</sup> and the NGF<sup>66</sup> considered it was important that non-registered participants be required to comply with the Rules or similar arrangements if they were to provide NSCAS. The NGF recommended that AEMO be required to consult on the obligations and standards for non-registered participants.<sup>67</sup>

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<sup>57</sup> AEMO Rule Change Request, p. 18.

<sup>58</sup> Alinta Energy Limited submission to the first round of consultation, 3 September 2010, p. 3.

<sup>59</sup> Hydro Tasmania submission to the first round of consultation, 2 September 2010, p. 4.

<sup>60</sup> NGF submission to first round consultation, 3 September 2010, p. 8.

<sup>61</sup> NGF submission to the first round of consultation, 3 September 2010, p. 7.

<sup>62</sup> AER submission to the first round of consultation, 6 September 2010, p. 2.

<sup>63</sup> AER submission to the first round of consultation, 3 September 2010, p. 2.

<sup>64</sup> Grid Australia submission to the first round of consultation, 3 September 2010, p. 12.

<sup>65</sup> Grid Australia submission to the first round consultation, 3 September 2010, p. 11.

<sup>66</sup> NGF submission to the first round of consultation, 3 September 2010, p. 7.

<sup>67</sup> NGF submission to the first round of consultation, 3 September 2010, p. 6.

## 7.2.2 Second round of consultation

AEMO<sup>68</sup> considered that including minimum terms and conditions in the NSCAS tender guidelines may potentially deter some competitive tenderers.

The NGF<sup>69</sup> considered that TNSPs, not just AEMO, should consult on the obligations of non-registered participants offering NSCAS. The NGF proposed that a new registration classification be created for such entities.

Snowy Hydro<sup>70</sup> was concerned about the possibility of TNSPs duplicating assets to provide NSCAS where existing service providers could also provide the equivalent services. Snowy Hydro also considers that under the proposed new arrangements TNSPs should only invest in NSCAS when there are insufficient services available from other service providers.

## 7.3 Commission's analysis

In relation to the acquisition of NSCAS by AEMO, the Rule Change Request suggested the following amendments to the current arrangements:

- the acquisition of NSCAS from persons other than registered participants; and
- the prohibition of the relevant jurisdictional TNSP from tendering to AEMO to provide NSCAS within its own region.

The Commission agrees with AEMO's proposal that it should be able to acquire NSCAS from persons other than registered participants. Allowing parties other than registered participants to provide NSCAS will increase the level of competition for the provision of these services. Increased competition would in principle reduce the costs to AEMO of providing NSCAS, and provide AEMO with greater flexibility to meet NSCAS needs.

However, parties that are not registered participants are not subject to the requirements of the Rules. This means they would not be subject to the provisions that seek to ensure that NSCAS would be provided in a safe and secure manner.<sup>71</sup> Hence the Commission agrees with AEMO that additional arrangements would be required for non-registered participants to provide NSCAS. AEMO proposed that these obligations and standards would form part of the tender documents and would, as a result, be formalised in contracts with successful NSCAS providers. The Commission considers that these minimum terms and conditions could be removed from the Rules as AEMO should be required to consult on the obligations and standards that would form part of the tender documents and that obligations and standards should reflect

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<sup>68</sup> Australian Energy Market Operator submission to the second round of consultation, 28 February 2011, p. 5.

<sup>69</sup> NGF submission to the second round of consultation, 25 February 2011, p. 6

<sup>70</sup> Snowy Hydro submission to the second round of consultation, 25 February 2011, p. 2.

<sup>71</sup> Clause 3.11.7 of the Rules.

the requirements in the Rules to the extent possible. This is important to ensure that this proposed arrangement would not adversely impact on system security or reliability outcomes, and also does not reduce transparency provided by the Rules. In addition, the tender documents should contain terms and conditions that are sufficiently flexible so as not to impose a barrier to competition.

The Commission notes that some stakeholders are concerned about whether TNSPs should be able to participate in tenders to AEMO. TNSPs are provided with revenue for meeting their service obligations on an ex-ante basis. This means TNSPs could be provided with a revenue allowance for NSCAS it proposes to acquire during a regulatory control period, but during the regulatory control period the TNSP could instead provide the service competitively to AEMO under tender (referred to as "double-dipping" as TNSPs would be paid twice for the one service). Hence allowing TNSPs to tender for the provision of NSCAS within their own regions may have implications that could impact on efficient outcomes. There is no concern with respect to other TNSPs nor the jurisdictional DNSPs tendering for NSCAS.

The Commission also recognises that, given the unique role of TNSPs with respect to other potential providers (e.g. TNSPs generally are aware of many of the technical aspects of other potential NSCAS providers due to their role in network connection), allowing TNSPs to tender for the service may distort the effectiveness of competition in the relevant market. Therefore precluding TNSPs from tendering for NSCAS within their own regions would remove the risks of acquiring NSCAS inefficiently and revenue double dipping.

However, the Commission is concerned that it may not always be practical, such as due to licensing requirements, for entities other than the local TNSPs to provide NSCAS. Also the Commission considers that the proposed framework would have sufficient transparency to alleviate the risks identified. In addition, the Commission's recommendation that AEMO should only be limited to acquiring NSCAS for system reliability and security needs, and that TNSPs are solely responsible for providing NSCAS for market benefit purposes will decrease the range of opportunities for TNSPs to exploit any competitive advantage. Therefore the Commission considers that on balance TNSPs should be able to tender to provide NSCAS within their own region.

The Commission considers that the ability of TNSPs to double dip under the proposed arrangements is limited. The arrangements are reasonably transparent with the NSCAS need being:

- identified in the AEMO NTNDP; and
- met through the AEMO tender process.

In addition, the AER would have oversight of the treatment of the TNSP's assets that become part of the RAB. AEMO would also be required to report on its acquiring of NSCAS in the NTNDP. Therefore the AER could clearly identify any incidents of TNSPs getting revenue from two sources for providing the same NSCAS. The AER would therefore be able to identify and exclude a contracted TNSP NSCAS asset from the TNSP's regulated asset base.

## 7.4 Conclusion

The Commission concludes that:

- TNSPs should not be precluded from tendering with AEMO to provide NSCAS within their own regions;
- AEMO should be able to acquire NSCAS from persons other than registered participants; and
- all providers of NSCAS should be required to meet the requirements in the Rules, to the extent possible, and AEMO would consult on the obligations and standards to apply.

## 8 Dispatching of NSCAS

NSCAS will cover services either dispatched by AEMO or a TNSP (for example, in accordance with a network support agreement). In either case, AEMO will be required to model the impact of dispatching those services in network constraint equations used in its central dispatch and PASA processes in order to improve dispatch and pricing outcomes, and to better manage power system security and reliability.

This chapter discusses the appropriate arrangements for assisting AEMO in deciding how to model, and when to dispatch, such NSCAS services.

### 8.1 Rule Change proponent's view

AEMO considers that TNSPs are not presently obliged to provide it with information about network support agreements they have.<sup>72</sup> AEMO considered that this arrangement diminishes its ability to achieve its power system security obligations through the central dispatch and PASA outcomes.<sup>73</sup>

Therefore, AEMO proposed that NSPs be obliged to update it with relevant information on their NSCAS provided under network support agreements. AEMO's proposal would oblige NSPs to provide:

- description of the NSCAS including details of:
  - the purpose for which it has been acquired;
  - the relevant connection points;
  - the quantity that can be provided;
  - the notice that is required before enablement of the service;
  - once enabled, the time to respond to a usage instruction; and
  - communication protocols related to enabling and usage and notification of changes to service availability;
- the availability of the NSCAS including any possible availability restrictions and whether other parties (such as AEMO) would be able to use the service;
- advice on any changes to the formulation of network limits to reflect the enabling or usage of the service; and
- where relevant, details of how and when the service could be dispatched by AEMO.

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<sup>72</sup> AEMO Rule Change Request, p. 27.

<sup>73</sup> Ibid.

AEMO also proposes to add two new obligations into the Rules. Firstly, an obligation on NSPs to negotiate in good faith with AEMO on the form of the instructions they would provide to AEMO on how to dispatch NSCAS (particularly in relation to scheduled or semi-scheduled plants). Secondly, an obligation for AEMO to develop and publish guidelines for the dispatch of NSCAS within central dispatch and PASA.

## **8.2 Stakeholder views**

### **8.2.1 First round of consultation**

The NGF supports more transparency for TNSP network support agreements.<sup>74</sup>

Grid Australia considered the Rules should only set out general types of information needed in recognition that specifics will vary depending on the particular circumstances of each network support agreement.<sup>75</sup>

### **8.2.2 Second round of consultation**

AEMO considered that the draft Rule was not clear as to whether NSCAS that it has acquired for power system reliability and security can be dispatched in order to relieve congestion and hence deliver market benefits.<sup>76</sup>

Grid Australia considered that the connection points for TNSPs to meet their obligations under clause 4.3.4(d)(1)(iii) may vary over time. Grid Australia suggests that the obligation should be to identify the point or points at some suitable level of aggregation. It considered that the Rules should only set out general types of information needed in recognition that specific details will vary, depending on the particular circumstances of each network support agreement.<sup>77</sup>

The NGF<sup>78</sup> and Snowy Hydro<sup>79</sup> considered that TNSPs do not have the necessary market experience to acquire NSCAS for market benefits and to dispatch that NSCAS in real-time in order to deliver those benefits.

## **8.3 Commission's analysis**

In making an assessment of the potential gap between the level of NSCAS provided by TNSPs and the identified NSCAS need for the national network, AEMO will be highly reliant on the information provided to it. In addition AEMO may direct or instruct any person to provide services to maintain power system security and reliability, including

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<sup>74</sup> NGF submission to the first round of consultation, 3 September 2010, p. 7.

<sup>75</sup> Grid Australia submission to the first round consultation, 3 September 2010, p. 12.

<sup>76</sup> AEMO submission to the second round of consultation, 28 February 2011, p. 3.

<sup>77</sup> Grid Australia submission to the second round consultation, 25 February 2011, p. 3

<sup>78</sup> NGF submission to the second round of consultation, 25 February 2011, p. 2.

<sup>79</sup> Snowy Hydro submission to the second round of consultation, 25 February 2011, p. 1 & 2.

NSCAS that are available to a NSP under a network support agreement. Therefore, the Commission recognises that the absence of quality information on such services would diminish AEMO's ability to achieve its power system security obligations through the central dispatch and PASA processes.

While the existing clause 4.3.4(d) of the Rules obliges a NSP to advise AEMO of any ancillary services or similar services provided under any connection agreement, it does not ensure that all the information necessary to allow AEMO to carry out its functions is provided. Therefore the Commission agrees with AEMO's proposal to strengthen the information disclosure requirements for NSPs. The detailed information in the network support agreements will assist AEMO to maintain system security and improve the efficiency of its dispatch process by:

- making AEMO more aware of all the options available to it for providing secure and efficient dispatch; and
- helping AEMO to formulate constraint equations to properly reflect the impact of dispatching NSCAS.

The Commission considers that making this information available to AEMO is important because it will assist in dispatching these services and improve pricing outcomes, thereby enhancing investment outcomes. Also, it is appropriate that this provision applies to both DNSPs and TNSPs as it could be possible that DNSPs have network support arrangements or demand response capabilities. The application of the requirements to NSPs would also maintain the application of existing clause 4.3.4 (d).

The Commission also accepts the rationale for the following obligations, proposed by AEMO, on:

- NSPs to negotiate in good faith with AEMO on the form of the instructions they would provide to AEMO on how to dispatch NSCAS (particularly in relation to scheduled or semi-scheduled plants); and
- AEMO to develop and publish guidelines for the dispatch of NSCAS within central dispatch and PASA.

These are important obligations to ensure that NSCAS is dispatched in the correct manner and when it is economically efficient to do so. In addition, they will add a level of transparency to the arrangements. The obligation on NSPs to negotiate in good faith with AEMO on the form of the instructions will ensure that those instructions are both comprehensive and practicable for AEMO to implement in central dispatch if required. Without this obligation, AEMO would not be able to dispatch NSCAS in the manner intended by the NSP and, if AEMO were to exercise its discretion in dispatching the service, this could leave AEMO open to dispute by the NSP if their decision was subsequently perceived as wrong.

The Commission notes AEMO's concern as to whether it can dispatch NSCAS that it has acquired (for reliability or security) in order to relieve network congestion and hence provide market benefits. If AEMO has acquired NSCAS because the associated

need has not been met by a TNSP, and the NSCAS is required to maintain system security and supply reliability, then it should be able to dispatch this NSCAS when it would provide a net market benefit. That is, AEMO should be able to dispatch all NSCAS available to it in order to maximise the net benefit to the market.

The Commission also accepts Grid Australia's concern that the size and location of aggregated NSCAS is not precisely known and varies over time. The Commission considers that when a NSCAS need is met by an aggregated service then it would generally be sufficient for AEMO to know the general location and estimated size of the response. In such cases the TNSP should provide AEMO with estimates of the likely size and location that the service would provide if called upon.

The Commission acknowledges that the NGF and Snowy Hydro are concerned that the TNSPs may not necessarily have sufficient expertise to effectively dispatch NSCAS to deliver market benefits. Under the Rule NSCAS acquired by a NSP can either be dispatched by the NSP or by AEMO, where this is agreed by AEMO and the NSP. The Commission agrees that it is important that NSCAS that are acquired by a NSP are effectively dispatched in order to meet the associated NSCAS need. Therefore, the Commission has added a principle in clause 4.3.4(d1) requiring NSPs that have acquired NSCAS to agree a protocol for the dispatch of the NSCAS to ensure that the associated NSCAS need is met.

## **8.4 Conclusion**

The Commission agrees with AEMO's proposal and concludes that:

- NSPs will be required to provide relevant information on their NSCAS provided under network support agreements to AEMO;
- NSPs will be obliged to negotiate in good faith with AEMO on the form of the instructions they will provide to AEMO on how to dispatch NSCAS;
- where a NSCAS need is met by NSCAS acquired by a NSP, the NSP and AEMO need to agree a protocol for the dispatch of the NSCAS to ensure that the associated NSCAS need is met; and
- AEMO must develop and publish guidelines for the dispatch of NSCAS within central dispatch and PASA, including the dispatch of NSCAS acquired to maintain system security or reliability of supply.

## 9 Funding and cost recovery of NSCAS

This chapter sets out the assessment of the issues relating to how the costs of acquiring and dispatching NSCAS are recovered by AEMO.

### 9.1 Rule Change proponent's view

Under the existing arrangements the costs for NSCS are recovered in two ways:

- NSCS costs incurred by TNSPs are recovered from users of their networks through the TNSPs' regulated transmission charges,<sup>80</sup> and
- NCAS acquired by AEMO are recovered from all Market Customers in the NEM on a pro-rata basis through market charges.<sup>81</sup>

AEMO considered the existing cost recovery arrangements for NCAS it acquires are inappropriate because service costs are not recovered from those receiving the benefit.<sup>82</sup> AEMO has proposed that costs for NSCAS acquired by it should be recovered from Market Customers in benefiting regions on the basis of the proposed regional benefit ancillary services procedures.

AEMO has also proposed that where TNSPs provide NSCAS through tender to AEMO that this would be treated as non-regulated revenue.

### 9.2 Stakeholder views

#### 9.2.1 First round of consultation

Stakeholders generally agreed with the proposed funding and cost recovery arrangements.

The NGF considered that TNSPs should fund NSCAS acquired by AEMO given that it is their responsibility to acquire NSCAS.<sup>83</sup> That is, the same cost recovery approach should be used whether or not the need was addressed by the TNSP or by AEMO.

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<sup>80</sup> Clauses 6A.6.6 and 6A.6.7 allow TNSPs to recover capital and operating expenditure such that they comply with all applicable regulatory obligations or requirements associated with the provision of prescribed transmission services and maintain the quality, reliability and security of supply of prescribed transmission services and of the transmission system through the supply of prescribed transmission system.

<sup>81</sup> Clause 3.15.6A(c) of the Rules.

<sup>82</sup> AEMO Rule Change Request, p. 30.

<sup>83</sup> NGF submission to the first round of consultation, 3 September 2010, p. 7.

### **9.2.2 Second round of consultation**

Stakeholders did not raise significant policy issues in relation to the funding and cost recovery of NSCAS.

### **9.3 Commission's analysis**

The Commission considers that the costs of AEMO acquiring NSCAS should be recovered from the Market Customers in benefiting regions, rather than from the network users in the region where the cost is incurred. For example, it is quite possible that acquiring NSCAS in an exporting region could increase the transfer capability of an associated interconnector. This could benefit the Market Customers in the importing region, while under the current arrangements the costs would be recovered from network users in the exporting region. The proposed change by AEMO would, in this case, shift the cost of acquiring NSCAS to the beneficiaries.

However, the beneficiaries of acquiring NSCAS may not always be immediately obvious. Therefore, the Commissioning agrees that AEMO should be required to develop regional benefit ancillary services procedures. These procedures should be developed under consultation with stakeholders, in accordance with the Rules consultation procedures.

With regard to NSCAS costs incurred by TNSPs, the Commission considers that the existing framework for determining how TNSPs recover their network expenditure should continue to apply. That is, such costs would be treated the same as all network expenditure and recovered through the TNSPs' regulated transmission charges.

### **9.4 Conclusion**

The Commission agrees with AEMO's proposal and concludes that:

- the costs for NSCAS acquired by AEMO should be recovered from Market Customers in benefiting regions on the basis of the regional benefit ancillary services procedures;
- in accordance with the consultation procedures under the Rules, AEMO would develop regional benefit ancillary services procedures in order to determine the beneficiaries when NSCAS is acquired;
- where a TNSP provides NSCAS through tender to AEMO, the costs would be treated as non-regulated revenue; and
- NSCAS costs incurred separately by TNSPs are recovered from network users through the TNSPs' regulated transmission charges.

## 10 Commencement Date

This chapter sets out the assessment of the issues relating to the commencement date of the Rule as Made.

### 10.1 Rule Proponent's view

AEMO considers that the Rule should contain transitional arrangements to allow AEMO to:<sup>84</sup>

- continue to acquire NCAS under the existing contracts and extend these contracts (as agreed) until the new arrangements are in place;
- develop and publish the NSCAS description and the NSCAS quantity procedure to take effect from the commencement date; and
- develop and publish the NMAS Tender Guidelines for NSCAS, the guidelines for dispatch, and the new regional benefit ancillary services procedure in accordance with the Rules consultation procedure.

### 10.2 Stakeholder views

The NGF<sup>85</sup> and Snowy Hydro<sup>86</sup> considered that there should be a transition period of between 18 to 24 months before the Rule commenced. This period was considered necessary to address implementation and transition issues.

### 10.3 Commission's analysis

The Commission considers that it would be necessary for AEMO to be able to extend its existing contract in order to provide a smooth transition into the new arrangements. This would:

- remove the need to tender for new NCAS contracts immediately prior to commencing the NSCAS Rule; and
- allow the TNSPs time to prepare for taking over further responsibility for the acquiring of NSCAS.

The Commission also considers that the Rule should commence on 5 April 2012. This would give AEMO sufficient time prior to the commencement of the Rule to:

- amend the NMAS tender guidelines and the guidelines for the dispatch of NSCAS; and

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<sup>84</sup> AEMO Rule change request, p. 34.

<sup>85</sup> NGF submission to the second round of consultation, 25 February 2011, p. 4.

<sup>86</sup> Snowy Hydro submission to the second round of consultation, 25 February 2011, p. 2.

- develop and publish the NSCAS description, the NSCAS quantity procedure and the regional benefit ancillary services procedures.

#### **10.4 Conclusion**

The Commission agrees with AEMO's proposal and concludes that:

- AEMO be able to extend its existing NCAS contracts, with the agreement of the associated counter party;
- AEMO be required to amend the NMAS tender guidelines and the guidelines for the dispatch of NSCAS prior to the commencement of the Rule;
- AEMO must develop and publish the NSCAS description document, the NSCAS quantity procedure and the regional benefit ancillary services procedures prior to the commencement of the Rule.
- AEMO be able to commence these consultation processes prior to the commencement of the Rule; and
- the commencement date for the Rule should be 5 April 2012.

## Abbreviations

|            |  |
|------------|--|
| ACCC       | Australian Competition & Consumer Commission   |
| AEL        | Alinta Energy Limited                          |
| AEMC       | Australian Energy Market Commission            |
| AEMO       | Australian Energy Market Operator              |
| AER        | Australian Energy Regulator                    |
| COAG       | Council of Australian Governments              |
| Commission | See AEMC                                       |
| DNSP       | distribution network service provider          |
| MCE        | Ministerial Council on Energy                  |
| MNSP       | market network service provider                |
| NCAS       | network control ancillary services             |
| NECA       | National Electricity Code Administrator        |
| NEL        | National Electricity Law                       |
| NEM        | national electricity market                    |
| NEMMCO     | National Electricity Market Management Company |
| NEO        | National Electricity Objective                 |
| NGF        | National Generators Forum                      |
| NMAS       | non-market ancillary services                  |
| NSCAS      | network support and control ancillary services |
| NSCS       | Network Support and Control Services           |
| NSP        | network service provider                       |
| NSPs       | network service providers                      |
| NTNDP      | National Transmission Network Development Plan |

|       |   |
|-------|---|
| NTP   | National Transmission Planner               |
| PASA  | projected assessment of system adequacy     |
| RAB   | Regulatory Asset Base                       |
| RIT-T | regulatory investment test for transmission |
| Rules | National Electricity Rules                  |
| TNSPs | transmission network service providers      |

## A Summary of issues raised in first round submissions

| Stakeholder                            | Issue   | AEMC Response   |
|--|---|---|
| <b>Planning and acquiring of NSCAS</b> |   |   |
| AEL                                    | Concerned for the lack of responsibility for maximising inter-regional benefits of NSCAS and that no one has an obligation to undertake market benefit projects. p. 2.  | The Commission notes that under the proposed arrangements the NTNDP will identify "NSCAS needs" based on market benefits as well in relation to system reliability and system security. The Commission expects that this would encourage NSCAS that delivers market benefits, including interregional benefits. In addition, the Commission notes that the AEMC can consider requirements for market benefit projects in considering whether to exercise its Last Resort Planning Power (LRPP), potentially requiring a TNSP to perform the RIT-T on projects that deliver inter-regional benefits. |
| Hydro Tasmania                         | Concerned for the lack of responsibility for maximising inter-regional benefits of NSCAS. p 3.  | As above.   |
| AEL                                    | Concerned about the 18 month delay between AEMO identifying the need for NSCAS (to allow TNSPs to procure the NSCAS) and when AEMO procures the NSCAS. AEL are concerned that this may mean that the reliability and security of the power system may be compromised. p. 2. | The Commission considers that increased flexibility can be introduced by requiring AEMO to identify a date when it will consider whether: <ol style="list-style-type: none"> <li>1. NSCAS is still needed for security and reliability of supply; and</li> <li>2. whether the TNSPs intend to provide that NSCAS within a suitable time frame.</li> </ol>   |
| AER                                    | Considered that AEMO is financially neutral between non-network and network based solutions, and its proposed solutions are likely to be efficient. p. 2.   | The Commission notes the comments.  |
| Grid Australia                         | Considered AEMO's proposed ongoing role in the procurement of NSCAS is inconsistent with the COAG response to the Final Report of ERIG, cited in MCE correspondence to AEMC, 3 July 2007. <sup>87</sup> p.5. Considered   | The Commission agrees that the TNSPs should be the primary entities responsible for the procurement of NSCAS. However, the Commission considers AEMO should be able to procure NSCAS in order to maintain system reliability and security in a similar manner to its powers of direction.   |

<sup>87</sup> Available from [http://www.ret.gov.au/Documents/mce/\\_documents/MCE\\_Direction\\_to\\_AEMC20070713112430.pdf](http://www.ret.gov.au/Documents/mce/_documents/MCE_Direction_to_AEMC20070713112430.pdf)

| Stakeholder    | Issue  | AEMC Response  |
|----------------|--|--|
|                | that TNSPs should be the sole provider of NSCAS. The LRPP and AEMO power of direction would provide a sufficient safety net. p. 6.   |  |
| Transend       | Consider that TNSPs are able to effectively provide the most efficient technical envelope within which AEMO operates the system to ensure system security, and is therefore best placed to provide these services. p. 1.   | As above, the Commission agrees that the TNSPs should be the primary entities responsible for the procurement of NSCAS.  |
| Grid Australia | Noted that there is a disconnect between the spot trading benefits which AEMO pursues in real time, and the economic benefits pursued under the RIT-T, which are based on underlying costs. Therefore, Grid Australia considers that AEMO should not be responsible for procuring NSCAS based on market benefits. p. 8.  | The Commission notes this comment and agrees that AEMO should only be able to procure NSCAS to address a system reliability or system security issue.  |
| Grid Australia | <p>Considered that the role for AEMO to procure NSCAS as a last resort is:</p> <ul style="list-style-type: none"> <li>• inefficient, by maintaining confusion over accountabilities;</li> <li>• inconsistent, with TNSPs accountability for assessing the relative efficiency of both network support and network investment options; and</li> <li>• unnecessary, with COAG's requirements.</li> </ul> <p>In addition, under the LRPP the AEMC can require a TNSP to conduct a RIT-T when it has identified a need for a project that is otherwise unlikely to proceed. Grid Australia considered that the LRPP was specifically</p> | AEMO's role in procuring NSCAS would be limited to addressing system reliability or system security issues. This ability for AEMO to intervene would be similar to its powers of direction. These issues are discussed further in chapter 5. |

88 AEMC National Transmission Planning Arrangements - Final Report to MCE, 30 June 2008, p.78. <http://www.aemc.gov.au/Media/docs/National%20Transmission%20Planner%20Final%20Report%20to%20MCE-448faa16-c4c0-4f52-a922-114975692985-0.pdf> (accessed 18 August 2010).

| Stakeholder    | Issue  | AEMC Response  |
|----------------|--|--|
|                | considered as part of the AEMC's determination on the National Transmission Planner, with this power being left with AEMC, rather than with AEMO/NTP. <sup>88</sup> p. 9-10.   |  |
| Grid Australia | Considered that it is inefficient to have two last resort frameworks both operating with respect to the provision of network services, and is not good regulatory practice. p. 11.   | The ability for AEMO to procure NSCAS to address system reliability and system security issues would be consistent with AEMO's existing obligations and functions.   |
| Hydro Tasmania | Concerned that the first National Transmission Statement did not include a detailed model of Tasmania and, therefore, would not be useful for identifying NSCAS needs within Tasmania. p .2.   | As noted above, TNSPs would be the primary entities responsible for the procurement of NSCAS. It is also noted that the NTNDP would be different to the National Transmission Statement and that AEMO has consulted widely with stakeholders on the scope and purpose of the NTNDP.  |
| Hydro Tasmania | Concerned that the proposed 18 month period allowed for the TNSP to respond from an NSCAS being identified in the NTNDP is inflexible and may become a target. p. 3.   | The Commission notes the concerns and is proposing a more flexible arrangement (discussed in chapter 5).   |
| NGF            | The process for procuring NSCAS relies on information contained in the NTNDP and outcomes from the RIT-T assessments, which are untested instruments. That is, that the RIT-T is applied in a in an unbiased way and that the NTNDP provides all the information stakeholders need in relation to NSCAS. p. 1. | The Commission notes the NGF's concern but expects that AEMO and the AER, who have responsibility for the NTNDP and the RIT-T respectively, will monitor the performance of these mechanisms with the objective of improving their effectiveness.  |
| NGF            | Concerned that there is no evidence that the current arrangements are inefficient. In particular whether the prices paid by AEMO will be efficient. p. 3.  | For reasons as discussed in this draft Rule determination, there are aspects of the current arrangements that would benefit from clarification and can be improved.<br><br>The Commission considers that the proposed arrangements should be monitored and, if AEMO procures a significant quantity of NSCAS, a future investigation should occur to determine if this has been efficient. |
| NGF            | Concerned that the proposed 18 month period allowed for  | The Commission notes the concerns and is proposing a more flexible arrangement   |

| Stakeholder   | Issue  | AEMC Response   |
|---|--|---|
|   | the TNSP to respond from an NSCAS being identified in the NTNDP is inflexible and may become a target. p. 9.   | (discussed in chapter 5).   |
| NGF   | Concerned that a large amount of communications is required between AEMO and the TNSPs to ensure that there are no gaps in the planning and procurement of an efficient amount of NSCAS. This concern arose because the focus of TNSPs is intra-regional while the focus of AEMO is inter-regional. p.1, 4 & 7.                                | The Commission notes the NGF's concern but expects that AEMO and the AER, who have responsibility for the NTNDP and the RIT-T respectively, will monitor the performance of these mechanisms with the objective of improving their effectiveness.   |
| NGF   | Concerned that it remains unclear whether AEMO should only be viewed as a "safety net provider" or "last resort provider" of network services. Such a role description may falsely imply that AEMO take minimalist action. Over time AEMO may become more and more reluctant to procure these services when a genuine unmet need arises. p. 4. | The Commission considers that the clarification that AEMO would procure NSCAS to address system reliability or system security issues would go towards addressing this concern.   |
| <b>Definition and objective of NSCAS</b>                      |  |   |
| Department of Infrastructure, Energy and Resources (Tasmania) | Considered that the definition of NSCAS should include system inertia as it can act as a substitute for frequency control ancillary services. p. 1.  | The Commission considers that the proposed definition is sufficiently broad to accommodate system inertia. The Commission notes that AEMO is presently monitoring this issue and there may be more efficient ways for inertia to be provided than through network support agreements, however, consideration of this issue is likely to be outside the scope of this Rule change request. |
| Grid Australia  | Concerned that the definition of NSCAS may be unintentionally broad. p. 11.  | The draft Rule clarifies the definition of NSCAS.   |
| Hydro Tasmania  | Considered that the definition of NSCAS should include system inertia it can act as a substitute for frequency control ancillary services. p. 2.   | The Commission considers that the proposed definition is sufficiently broad to accommodate system inertia. The Commission notes that AEMO is presently monitoring this issue and there may be more efficient ways for inertia to be provided than through network support agreements, however, consideration of this issue is likely to be outside the scope                              |

| Stakeholder               | Issue  | AEMC Response  |
|---------------------------|--|--|
|                           |  | of this Rule change request.   |
| NGF                       | Concerned that the proposed definition of NSCAS is defined in terms of spot market trade, rather than market benefits, and is therefore less efficient. p. 6.  | The Commission notes the comments and the draft definition of NSCAS procured by the TNSPs is expressed in terms of market benefits, to be consistent with the RIT-T applied to transmission investments.   |
| Transend                  | Considered that the definition of NSCAS should include system inertia as it can act as a substitute for frequency control ancillary services. p. 2.  | The Commission considers that the proposed definition is sufficiently accommodates system inertia. The Commission notes that AEMO is presently monitoring this issue and there may be more efficient ways for inertia to be provided than through network support agreements, however, consideration of this issue is likely to be outside the scope of this Rule change request.  |
| <b>Provision of NSCAS</b> |  |  |
| AEL                       | Consider that the current arrangements that allow TNSPs to effectively procure free NSCAS under mandatory service acquisition of reactive power are not necessary efficient. Consider that market arrangements should be in place for the provision of these services. p. 1. | The Commission notes these comments but considers that they are out of the scope of this Rule change proposal.   |
| Hydro Tasmania            | Considered that TNSPs should be prohibited from tendering to AEMO to provide NSCAS within their own regions. p. 3.   | The Commission considers that ideally TNSPs should not be able to tender to provide NSCAS in their own regions to avoid the perception of double dipping. However, this may significantly reduce the number of available NSCAS sources, which in turn would reduce competition. Therefore, on balance the Commission considers the benefits of increased competition is likely to outweigh the risk of TNSPs double dipping.   |
| AEL                       | Consider that the obligations on TNSPs should be increased such that they are required to meet the NSCAS needs identified in the NTNDP. p. 3.  | The NTNDP is a planning tool and there may be valid reasons, as circumstances change, why it should not be a definitive trigger for investment. The Commission considers that it is up to the individual TNSPs to determine their own investment decisions so that they may meet the required standards, licence conditions and other regulatory obligations. The Commission considers that the ability for AEMO to procure NSCAS to maintain system reliability and security provides a |

| Stakeholder    | Issue   | AEMC Response   |
|----------------|---|---|
|                |   | <p>sufficient safety net.</p> <p>The Commission considers that the proposed approach is consistent with the COAG response to the Final Report of ERIG, cited in MCE correspondence to AEMC, 3 July 2007.<sup>89</sup></p>   |
| AER            | <p>Allowing TNSPs to participate in AEMO's tender process should promote competition and lower costs for NSCAS. p. 1.</p>   | <p>Comments have been noted.</p>  |
| AER            | <p>TNSPs will only have limited opportunities to obtain a regulated return on assets that it also offers to AEMO as NSCAS. p 2.</p>   | <p>Comments have been noted.</p>  |
| Grid Australia | <p>Considered that it was important that non-registered participants be required to comply with the Rules or similar arrangements. p. 11.</p>   | <p>The Commission agrees that AEMO should be able to acquire NSCAS from persons other than registered participants. However, the Commission considers that AEMO should consult on the obligations and standards that will form part of the associated tender documents, and that these obligations and standards should reflect the requirements in the Rules to the extent possible.</p> |
| NGF            | <p>Considered that it was important that non-registered participants be required to comply with the Rules or similar arrangements. The NGF recommended that AEMO be required to consult on the obligations and standards for non-registered participants. p. 6.</p> | <p>The Commission agrees that AEMO should be able to acquire NSCAS from persons other than registered participants. However, the Commission considers that AEMO should consult on the obligations and standards that will form part of the associated tender documents, and that these obligations and standards should reflect the requirements in the Rules to the extent possible.</p> |
| NGF            | <p>Consider that the mandatory provision of reactive service by generators does not lead to efficient outcomes. p. 1.</p>   | <p>Comments have been noted.</p>  |
| NGF            | <p>Concerned that the data asymmetries that exist between the TNSPs and generators may lead to an uneven playing field. p. 7.</p>   | <p>Comments have been noted.</p>  |

<sup>89</sup> Available from [http://www.ret.gov.au/Documents/mce/\\_documents/MCE\\_Direction\\_to\\_AEMC20070713112430.pdf](http://www.ret.gov.au/Documents/mce/_documents/MCE_Direction_to_AEMC20070713112430.pdf)

| Stakeholder                      | Issue  | AEMC Response  |
|----------------------------------|--|--|
| <b>Dispatch of NSCAS</b>         |  |  |
| Grid Australia                   | Considered that the Rules should only set out general types of information that are needed as the specific details may depending on the particular circumstances of each network support agreement. p. 12. | The Commission considers that AEMO needs to have access to the information contained in the network support agreements to enable it to maintain the system in a secure and reliable operating state.   |
| NGF                              | Considered that there needs to be more transparency for TNSP network support agreements. p. 7.   | The Commission notes the comment but considers that there needs to be transparency between AEMO and the TNSPs, in order for AEMO to effectively operate the market, and with the AER in order to ensure the appropriate regulation of the TNSPs. |
| <b>Funding and cost recovery</b> |  |  |
| AER                              | Noted there is a risk of TNSPs double dipping (i.e. receiving regulated revenue and then providing the service competitively through AEMO) but considered that this risk is not material. p. 2             | The Commission notes the comments.   |
| Grid Australia                   | Considered any risk of TNSPs double dipping could be managed through guidelines. p. 12.  | The AER would have oversight of the TNSPs cost recovery and considers that the risk of double dipping would be low.  |
| Hydro Tasmania                   | Supported recovering costs from Market Customers in the benefiting regions, but reserve comment on the proposed regional benefit ancillary services procedures until they are publically available. p.2.   | The Commission notes the comments.   |
| NGF                              | Considered that TNSPs should fund NSCAS procured by AEMO given it is their responsibility to procure NSCAS. p. 8.  | As discussed in chapter 9, the costs would be recovered from Market Customers that benefit from the service.   |
| Transend                         | Consider that the regional benefit ancillary services procedures need to consider the implications of Basslink as a market network service provider. p. 1.   | The Commission notes the comments.   |
| <b>Other Issues</b>              |  |  |

| Stakeholder | Issue   | AEMC Response  |
|-------------|---|--|
| NGF         | Concerned discretion would be provided to AEMO in the establishment and application of the relevant procedures and guidelines.<br>p. 8. | AEMO would only procure NSCAS to address system reliability or system security issues. Any of the relevant guidelines would also be developed in consultation with stakeholders. |

## B Summary of issues raised in second round submissions

| Stakeholder                              | Issue   | AEMC Response  |
|--|---|--|
| <b>Definition and objective of NSCAS</b> |   |  |
| Grid Australia                           | <p>Considers that it is unclear how the scope of NSCAS might be extended to include additional services such as system inertia.</p>   | <p>The Commission considers that the definition of NSCAS provided in the draft Rule "a service with the capability to control the active power or reactive power flow into or out of a transmission network to address an NSCAS need" is sufficiently broad to include system inertia to the extent that additional system inertia may increase the ability of the network to transfer active or reactive power.</p> <p>The Commission notes that AEMO is presently monitoring this issue and, in the future, may propose more efficient ways for inertia to be provided than through network support agreements. If it is determined that acquiring NSCAS is appropriate then the precise mechanism would be considered in detail at that time. This may require amending the NSCAS description document.</p> |
| <b>Planning and acquiring of NSCAS</b>   |   |  |
| AEMO                                     | <p>Considered that the "NSCAS trigger date" should be defined as the earliest date that AEMO would act to acquire NSCAS to meet a NSCAS need. p. 3.</p> <p>Also suggested clause 5.6.2A(c)(6A) should read "include an assessment that identifies any NSCAS need and the date by which the NSCAS need materialises (NSCAS trigger date) for a planning horizon of at least 5 years from the beginning of the year in which the NTNDP applies; and". p. 8.</p> | <p>The Commission considers that the "NSCAS trigger date" should refer to the date when the NSCAS need is anticipated to arise, as identified in the NTNDP.</p> <p>However, the Commission agrees with AEMO that it should identify, and publish in the NTNDP, the earliest date that AEMO would commence the tendering process in order to acquire the NSCAS. In setting this date AEMO would need to consider the time necessary to complete its tendering process when specifying the date when it would commence tendering, and this may vary on a case by cases basis.</p> <p>The Commission also agrees with the changes proposed in clause 5.6.2A(c)(6A), subject to the comment above.</p> <p>This is reflected in clause 5.6A.2(c)(6A) of the final Rule.</p>   |
| AEMO                                     | <p>Suggested that replacing the heading "Procedure for determining quantities of network control ancillary services" for section 3.11.4 with "Guidelines and</p>  | <p>The Commission agrees with this change as it better describes the intent of the clause.</p>   |

| Stakeholder | Issue   | AEMC Response   |
|-------------|---|---|
|             | objectives for acquisition of network control ancillary services". p. 7.  |   |
| AEMO        | Considered that the words "where NSCAS need has the meaning in clause 3.11.4(b)" in the chapter 10 definition of NSCAS are redundant as NSCAS need is defined separately. p. 8.   | The Commission agrees with the proposed change to the Rule as it removes redundancy.  |
| NGF         | Considers that the TNSPs are not structured to have the necessary experience market experience to acquire NSCAS to deliver market benefits, and to dispatch this NSCAS in order to deliver market benefits in real time. The NGF advocates that AEMO should plan and acquire NSCAS for market benefits. Further the NGF considers that there is no evidence that AEMO (or NEMMCO) has not adequately performed this function. p. 2. | <p>The Commission acknowledges the concerns of the NGF but notes that:</p> <ul style="list-style-type: none"> <li>• the need for NSCAS to deliver market benefits is determined by AEMO in the NTNDP;</li> <li>• TNSPs would have the first option of acquiring the identified NSCAS (AEMO would only need to acquire NSCAS when it considers that the NSCAS gap will remain unmet and it is needed for reliability of supply or power system security); and</li> <li>• AEMO could dispatch the NSCAS to deliver market benefits, if it is not dispatched by the TNSPs.</li> </ul> <p>That is, while the TNSPs have the primarily responsibility for acquiring NSCAS to maximise market benefits, AEMO is also responsible for identifying the NSCAS needs and may undertake the real-time dispatch of NSCAS.</p> |
| NGF         | Concerned that the RIT-T allows TNSP the discretion to ignore market benefit from "enhanced spot market trade". p. 2.   | The Commission notes the NGF's concern however an evaluation of the RIT-T process and its implementation is outside the scope of this Rule change assessment.   |
| NGF         | Concerned that the draft Rule does not require TNSPs to acquire NSCAS for market benefits. p. 2, 3 and 5.   | The Commission notes the concern that TNSPs do not have an obligation to acquire NSCAS. However, the final Rule provides a transparent process where the NSCAS needs are publically identified and progress against these NSCAS needs is reported publicly by AEMO in subsequent NTNDPs. The Commission has also added a requirement on TNSPs to report on progress in its APR and to respond to questions from the AEMC on the reasons.  |
| NGF         | Concerned that the TNSPs would be required to apply the largely untested RIT-T  | The Commission notes that under the final Rule AEMO would be responsible for identifying a NSCAS need. This is  |

| Stakeholder | Issue  | AEMC Response   |
|-------------|--|---|
|             | when determining whether to acquire NSCAS. p. 3.   | consistent with the current arrangements where AEMO plans, acquires and dispatches NSCAS.   |
| NGF         | Consider that TNSPs have struggled with applying the Market Benefits section of the RIT-T, therefore, are they capable of considering real time market benefits. p. 2.   | The Commission notes the NGF concern, however under the final Rule the dispatch of NSCAS for maximising market benefits would remain with AEMO.   |
| NGF         | Consider that the TNSPs will be biased towards building their own assets rather than acquire NSCAS to meet a NSCAS need. The NGF is particularly concerned given that it will administer the NSCAS tender process. p. 6. | The Commission considers that this issue is out of scope. However, the incentives on TNSPs to address network service needs using capital expenditure versus using operating expenditure are addressed in Chapter 6 of the Rules and managed by the AER. In its final report for Stage 2 of the Review of Demand-Side Participation in the National Electricity Market, <sup>90</sup> the Commission stated that it considered that there is not an imbalance in the risk of recovering capital or operating expenditure that creates a bias against DSP. The issue of revenue recovery risk was raised in the TEC Rule proposal on Demand Management. <sup>91</sup> In response to that proposal, the Commission made a Rule determination to align the risks and payoffs between capital and operating expenditure. This means providing certainty that ongoing expenditure on DSP initiatives is recovered and not subject to a review by the AER. |
| Snowy Hydro | Consider that the TNSPs will be biased towards building their own assets rather than acquire NSCAS to meet a NSCAS need. p. 1.   | The Commission considers that this issue is out of scope. However, the incentives on TNSPs to address network service needs using capital expenditure versus using operating expenditure are addressed in Chapter 6 of the Rules and managed by the AER. In its final report for Stage 2 of the Review of Demand-Side Participation in the National Electricity Market, <sup>92</sup> the Commission stated that it considered that there is not an imbalance in the risk of recovering capital or operating expenditure that creates a bias against DSP. The issue   |

<sup>90</sup> Page 22 of the final report stage 2 of the AEMC DSP review is available at <http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-Demand-Side-Participation-in-the-National-Electricity-Market.html>

<sup>91</sup> More information on this proposal can be found at <http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Demand-Management.html>

<sup>92</sup> Page 22 of the final report stage 2 of the AEMC DSP review is available at <http://www.aemc.gov.au/Market-Reviews/Completed/Review-of-Demand-Side-Participation-in-the-National-Electricity-Market.html>

| Stakeholder               | Issue   | AEMC Response   |
|---------------------------|---|---|
|                           |   | <p>of revenue recovery risk was raised in the TEC Rule proposal on Demand Management.<sup>93</sup> In response to that proposal, the Commission made a Rule determination to align the risks and payoffs between capital and operating expenditure. This means providing certainty that ongoing expenditure on DSP initiatives is recovered and not subject to a review by the AER.</p>   |
| Snowy Hydro               | <p>Considers that the TNSPs do not have the necessary market experience to acquire NSCAS to deliver market benefits, particularly in relation to the spot market. In particular, Snowy Hydro considers that the TNSPs do not have sufficient spot market experience to make informed assessments of NSCAS. p. 1 and 2.</p>      | <p>The Commission notes the concerns of the NGF but notes that:</p> <ul style="list-style-type: none"> <li>• the need for NSCAS to deliver market benefits is determined by AEMO in the NTNDP;</li> <li>• TNSPs would have the first option of acquiring the identified NSCAS (AEMO would only need to acquire NSCAS when it considers that the NSCAS gap will remain unmet and it is needed for reliability of supply or power system security); and</li> <li>• AEMO could dispatch the NSCAS to deliver market benefits, if not dispatched by the TNSPS.</li> </ul> <p>That is, while the TNSPs have the primarily responsibility for acquiring NSCAS to maximise market benefits, AEMO is also responsible for identifying the NSCAS needs and is primarily responsible for the real-time dispatch of NSCAS.</p> |
| <b>Provision of NSCAS</b> |   |   |
| AEMO                      | <p>Considers that the draft clause 3.11.5(g) would remove flexibility when negotiating NSCAS agreements, and potentially deter some competitive tenderers, by imposing minimum commercial and technical terms and conditions.</p> <p>AEMO suggested amendments to clauses 3.11.5(b)(8) and 3.11.5(g) to remove reference to</p> | <p>The Commission agrees with AEMO. While the tender documents include terms and conditions, it may be possible that some potentially competitive tenderers may be deterred.</p> <p>However, the Commission does note that under the NEL and NER AEMO has responsibility for power system security and reliability in the NEM. Therefore, the Commission anticipates that AEMO would only acquire NSCAS from entities that are not registered participants when this would not compromise power system security and reliability.</p>  |

<sup>93</sup> More information on this proposal can be found at <http://www.aemc.gov.au/Electricity/Rule-changes/Completed/Demand-Management.html>

| Stakeholder | Issue   | AEMC Response   |
|-------------|---|---|
|             | "minimum" terms and conditions. p. 5.   |   |
| AEMO        | <p>AEMO also notes that page 11 of the draft determination incorrectly indicates that the draft Rule:</p> <ul style="list-style-type: none"> <li>• "adds an obligation on AEMO to consult on the obligations and standards that would form part of tender documents for NSCAS"; and</li> <li>• "includes a provision that all providers of NSCAS should be required to meet the requirements in the Rules".</li> </ul> <p>AEMO Considers that these are existing obligations in clauses 3.11.5(b)(8) and 3.11.5(o). p. 5.</p> | <p>The Commission agrees that the existing clause 3.11.5(b)(8) specifies that the tender guidelines include the terms and conditions that the ancillary service agreements would include and that, under clause 3.11.5(c), these terms and conditions would be developed by applying the Rules consultation procedures.</p> <p>The Commissions notes that the existing clause 3.11.5(o) applies to registered participants but been changed to include all NSCAS providers.</p> |
| AEMO        | Suggested italicizing "NMA tender guidelines" in clause 3.11.5(f)(2). p. 7.   | The Commission agrees that the change provides greater consistency.   |
| AEMO        | Considers that clause 5.3.6(c1) becomes redundant if clause 3.11.4(b)(1) is deleted, in accordance with AEMO's Rule change proposal. AEMO considers that this was an error introduced in the National Electricity Amendment (System Restart Ancillary Services and Pricing under Market Suspension) Rule 2006 No. 6, when clause 3.11.4 was renumbered to 3.11.3. p.6.  | <p>The Commission agrees and removed the clause 5.3.6(c1).</p> <p>The Commission notes that clause 5.3.6(c1) was a civil penalties clause.</p>  |
| AEMO        | Suggested clause 5.6.2A(b)(6A) should read "the level of NSCAS capabilities provided to the <i>transmission network</i> in the previous year with a description of relevant NSCAS services, including the proportion of such services that have been acquired by AEMO in accordance with clause   | The Commission agrees with the proposed change as NSCAS relates to transmission networks and NSCAS services effectively repeats the word services.  |

| Stakeholder    | Issue  | AEMC Response  |
|----------------|--|--|
|                | 3.11.5; ". p. 7.   |  |
| AEMO           | Suggested AEMO should be italicised in clause 5.6A.2(c)(6B). p. 8.   | The Commission agrees.   |
| Grid Australia | Notes that draft clause 3.11.5(b)(2) replaces "SRAS" with "NMAAS", thus requiring all NMAAS tenders to have the facility tested in accordance with the requirements of clause 3.11.4A(e). If this is the intension, Grid Australia considers that clause 3.11.4A should be amended to refer to NSCAS, and not just SRAS. p. 3. | The Commission notes that the implications of the change from "SRAS" to "NMAAS" in clause 3.11.5(b)(2) and removed the change in the final Rule. The Commission considers that the testing requirements of clause 3.11.5(b)(3) are sufficient.   |
| Grid Australia | Notes that clause 8.2.1(a1) explicitly makes "NMAAS providers" subject to the dispute resolution procedures. However, it is not clear where clause 3.11.5(l) can bind NSCAS preferred tenders to the dispute provisions of Rule 8.2 prior to them becoming "NMAAS providers". p. 3.  | The Commission agrees and NSCAS preferred tenderers" is included in clause 8.2.1(a1) and as a Chapter 10 defined term.   |
| NGF            | Considers that TNSPs, not just AEMO, should consult on the obligations of non-registered participants offering NSCAS. The NGF proposes that a new registration classification be created for such entities. p. 6.  | <p>The Commission notes the NGF's concern but it does not consider that:</p> <ul style="list-style-type: none"> <li>• TNSPs specifically need to consult on obligations for non-registered participants; or</li> <li>• a separate registration classification is required for NSCAS providers.</li> </ul> <p>The Commission considers that the existing requirements in the Rules are sufficient as:</p> <ul style="list-style-type: none"> <li>• entities connected to the TNSP network are required to meet the technical standards defined in schedules of chapter 5 of the Rules;</li> <li>• existing arrangements allow TNSPs to enter into network support agreements with non-registered participants.</li> </ul> |
| Snow Hydro     | Concerned about the possibility that TNSPs have duplicated assets to provide NSCAS where there already exists other Service  | The Commission considers that the proposed arrangements provide sufficient transparency and regulation through the AER when an existing service is available and offered into the NEM at a price less  |

| Stakeholder              | Issue  | AEMC Response   |
|--------------------------|--|---|
|                          | Providers who can provide this service. Snowy Hydro believes that under the proposed new arrangements TNSPs should only invest in NSCAS when there are insufficient services available from other Service Providers. p. 2.   | than the cost the TNSP would incur if it provided the service.  |
| <b>Dispatch of NSCAS</b> |  |   |
| AEMO                     | Concerned that the draft Rules does not provide guidelines to AEMO on the dispatch of NSCAS acquired by AEMO. It considers that it would be able to dispatch NSCAS it has acquired (for reliability or security) in order to relieve network congestion and provide market benefits. p. 3.   | The Commission notes that the draft Rule is silent on when AEMO can dispatch NSCAS it has acquired in order to deliver market benefits. The Commission considers that AEMO should be able to dispatch any NSCAS in order to provide market benefits, including NSCAS it has acquired to maintain power system security or reliability of supply. This is reflected in the final determination and final Rule. |
| Grid Australia           | Supports proposed clause 3.11.6(d), which requires AEMO to comply with the Rules consultation procedures when making or amending the guidelines for developing the NMAS dispatch procedures. While the dispatch procedures themselves are not proposed to be subject to the Rules consultation procedures, Grid Australia would expect that AEMO would consult with the Dispatch and Pricing Reference Group before finalising these procedures. p. 3. | The Commission notes that clause 3.11.6(e) requires that AEMO complies with the Rules consultation procedures when it develops the guidelines for the dispatch of NSCAS. Clause 3.11.6(f) provides that AEMO may make minor administrative amendments to the guidelines without complying with the Rules consultation procedures.   |
| Grid Australia           | Notes the connection points for TNSPs to meet their obligations under clause 4.3.4(d)(1)(iii) may vary overtime. Grid Australia suggests that the obligation should be to identify the point or points at some suitable level of aggregation. p. 3.  | The Commission notes Grid Australia's concern particularly in relation to aggregated sources of NSCAS such as a loading shedding service provided by a demand aggregator.<br><br>The Commission has amended the final Rule to allow TNSPs to provide aggregated information, provided the information is sufficiently detailed to meet AEMO's needs.  |
| Grid Australia           | Suggest that clause 4.3.4(d)(4) be redrafted to: "if the NSCAS is to be dispatched by AEMO, when   | The Commission agrees.  |

| Stakeholder                      | Issue  | AEMC Response   |
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|                                  | and how this is to occur". p. 3.   |   |
| Grid Australia                   | Notes that the existing reference to clause 4.8.9 is deleted in the draft clause 3.11.5(a). Grid Australia questioned whether this was to clarify that AEMO's power to dispatch NMAS is separate from its power to direct for power system security reasons. p. 3. | The Commission confirmed that this was to clarify that AEMO's power to dispatch NMAS is separate from its power to direct for power system security reasons.  |
| <b>Funding and cost recovery</b> |  |   |
| AEMO                             | Consider that a new definition for "regional benefit ancillary services procedures" is required for consistency. p. 9.   | The Commission does not agree with AEMO because the term "regional benefit ancillary services procedures" is referenced in a single clause.   |
| <b>Other Issues</b>              |  |   |
| NGF                              | Consider that an period of at least 18 months is required to address transitional issues. p. 4.  | The Commission notes the NGF's concerns and has consulted with AEMO regarding the time necessary for it to amend and develop the various guidelines and procedures. The Commission has set a commencement date of the NSCAS Rule as 5 April 2012.         |
| Snowy Hydro                      | Consider that a transition period of at least 18 to 24 months is required to address implementation and transition issues. p .2  | The Commission notes the Snowy Hydro's concerns and has consulted with AEMO regarding the time necessary for it to amend and develop the various guidelines and procedures. The Commission has set a commencement date of the NSCAS Rule as 5 April 2012. |