Australian Energy Market Commission

RULE CHANGE

CONSULTATION PAPER

National Electricity Amendment (Network Support and Control Ancillary Services) Rule 2010

22 July 2010

This consultation paper has been prepared to facilitate public consultation on the Rule change request and does not represent the views of the Commission or any individual Commissioner of the Australian Energy Market Commission.

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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 to be the rule maker for national energy markets. The AEMC is currently responsible for rules and providing advice to the MCE on matters relevant to the national energy markets. We are an independent, national body. Our key responsibilities are to consider rule change proposals, conduct energy market reviews and provide policy advice to the Ministerial Council as requested, or on AEMC initiative.

Contents

1 Introduction

On 13 April 2010, the Australian Energy Market Operator (AEMO) (Proponent) submitted a Rule change request to the Australian Energy Market Commission (AEMC or Commission) in relation to network support and control ancillary services (NSCAS). Broadly, the proposed Rule changes seek to improve the current arrangements for the planning, acquisition, and cost recovery of NSCAS.

This Consultation Paper has been prepared by the staff of the AEMC to facilitate public consultation on the Rule change proposal. This Paper does not represent the views of the AEMC or of any individual Commissioner of the AEMC.

This paper:

- sets out a summary of, and a background to, Network Support and Control Ancillary Services proposed by the Proponent;
- identifies a number of questions and issues to facilitate the consultation on this Rule change request; and
- outlines the process for making submissions.

2 Background

2.1 History of the Rule Change Request

AEMO's Rule Change Request seeks to implement recommendations from the Final Determination of its review of Network Support and Control Services (NSCS) (NSCS Review). The National Energy Market Management Company (NEMMCO), and then AEMO, was obliged under clause 3.1.4(a1)(4) of the Rules to conduct a review into the provision of Network Control Ancillary Services (NCAS) in consultation with Registered Participants, Intending Participants and interested parties. The review was required to include:

- a review of the responsibilities of AEMO (originally NEMMCO) and Transmission Network Service Providers (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 recruiting 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).[1] The amendments were a consequence of a review undertaken by NEMMCO on ancillary services arrangements in 1999.[2] 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.[3]"

The NSCS Review commenced on 29 July 2008 with the release of an Issues and Options Discussion Paper.[4] The main reason for the delay between the insertion of the review requirement in the Code and the commencement of the review was that the Code and then Rules required NEMMCO first to have regard to the outcomes of a yet to be commenced review. This was a National Electricity Code Administrator (NECA)

1 Australian Competition & Consumer Commission (ACCC), *Applications for Authorisation, National Electricity Code, Ancillary Services Amendments*, 11 July 2001.

2 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.

3 Ibid, p. xv.

4 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.

review which was never completed.[5] In addition, with the AEMC's agreement, the NSCS Review was delayed until the AEMC's Congestion Management Review was completed given it addressed similar issues.[6]

2.2 What are NSCS?

AEMO's review considered the full suite of NSCS. The review undertaken was broader than that required under the Rules, which only required AEMO to consider NCAS. Broadening the review allowed AEMO to consider services procured or delivered by both TNSPs and AEMO. In its Final Scoping Paper 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 are considered at the same time.[7]

NSCS are not defined in the Rules. However, NEMMCO described NSCS in its Final Scoping Paper for the Review as:

> "network services procured or supplied by either TNSPs or NEMMCO that are critical to the maintenance of secure and reliable operation of the power system.[8]"

In the NSCS Review Final Scoping Paper NEMMCO described the types of services provided by NSCS.[9] Broadly, NSCS provide the capability to control the active or reactive power flow into or out of a transmission network. NSCS can be used to achieve the following objectives:

- **network control services** - help to maintain the secure and reliable operation of the power system; and
- **network support services** - increase power flow capability for economic benefit.

NSCS are presently procured by both TNSPs and AEMO. This is the key distinction between NSCS and NCAS. While NCAS is considered as a subset of NSCS, it effectively has the capability to provide all the elements described above as NSCS. The services that TNSPs and AEMO procure and deliver, and the outcomes they seek to achieve, are in many ways, difficult to distinguish. However, under the Rules NCAS can only be procured and deployed by AEMO.[10] For this reason, the generic term of NSCS is used for these services that are provided by both TNSPs and AEMO. Whereas

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5 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.

6 AEMC, *Congestion Management Review - Final Report*, June 2008, p. 275.

7 NEMMCO, *Review of Network Support & Control Services: Final Scoping Paper*, 2 June 2008, p. 14.

8 NEMMCO, *Review of Network Support & Control Services: Final Scoping Paper*, 6 March 2008, p. 1.

9 NEMMCO, *Review of Network Support & Control Services: Final Scoping Paper*, 2 June 2008, p. 9

10 Definition of Network Control Ancillary Services, Chapter 10 of the Rules.

the term NCAS can only be applied to services procured by AEMO in accordance with the Rules.

Broadly, TNSPs are responsible for ensuring an intra-regionally reliable transmission network operated within secure limits.[11] TNSPs achieve this by:

- undertaking planning and building of network infrastructure;
- operating the network as required by AEMO; and
- entering into network support contracts.

AEMO is responsible for ensuring a National Electricity Market (NEM)-wide secure and reliable power system.[12] AEMO must maintain power system security on a continuous basis and cover the next credible contingency.[13] AEMO can procure non-market ancillary services, such as NCAS, to achieve this end.[14]

Delivery of NSCS can be accomplished with a variety of technologies and is highly location specific. Examples of NSCS technology include:

- capacitor banks providing static voltage support as MVar injections;
- reactors providing static voltage support as MVar absorption;
- static Var compensators providing dynamic voltage support through MVar injection or absorption;
- small generators directionally controlled to provide:
  - network support by being "constrained-on";
  - dynamic voltage support through MVar injection or absorption while either operating in generation mode or SynCon mode;
- small loads providing demand-side management as either:
  - pre-contingent network support (e.g enabling / arming the rapid unloading of a smelter); or
  - post-contingent network support (e.g. utilising the rapid unloading of a smelter).

11 Schedules 5.1 and 5.1a of the Rules.

12 Clause 4.3.1(k) of the Rules.

13 Clause 4.2.6(b) of the Rules

14 Clause 3.11.3(a) of the Rules.

3 Details of the Rule Change Request

The Rule Change Request from the Proponent proposes that:

- the definition of NCAS be replaced with 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;
- the objective of NSCAS 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;
- TNSPs would have the primary responsibility for procuring NSCAS;
- AEMO would plan its NSCAS requirements through the National Transmission Network Development Plan (NTNDP) process;
- AEMO would tender for NSCAS when a NSCAS need has been identified in the NTNDP and remained unmet for 18 months;
- a broader range of providers, including non-Registered Participants, would be allowed to tender for the provision of NSCAS;
- TNSPs would be required to provide and update AEMO with relevant information on their NSCAS provided under Network Support Agreements; and
- AEMO could recover its NSCAS costs from Market Customers in benefiting regions in accordance with the proposed Regulation Benefit Ancillary Services Procedures.

In its Rule Change Request the Proponent provides its rationale for the Rule change. A number of key points raised in the Rule change request are summarised as follows:

- the responsibilities for procuring NSCS are inconsistent and lack clarity, as a result, TNSPs do not adequately plan to address the underlying NCAS requirement through their own regulated investment process;
- the definition and objectives of NCAS are too narrow such that the full range of benefits are not considered;
- there is no integrated national planning focus, therefore, optimisation of NCAS with 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, as a result, AEMO's 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.

The proponent's Rule change request includes a proposed Rule.

4 Assessment Framework

The Commission's assessment of this Rule Change Request must consider whether the proposed Rule promotes the National Electricity Objective (NEO) as set out under section 7 of the National Electricity Law (NEL). In assessing the Rule Change Request against the NEO the following issues will be taken into consideration:

1. signals for efficient investment - will the proposed arrangements improve the transparency and regulatory certainty in the framework such that signals for efficient investment are improved;

2. efficient use of electricity services - does the proposed Rule improve the likelihood of the benefits of the existing network being maximised so that network investments only occur when it is efficient;

3. barriers to entry - if barriers exist, does the proposed Rule adequately address the barriers to potential providers wishing to supply NSCAS;

4. administrative efficiency - do the benefits achieved through the proposed planning and dispatch arrangements outweigh the costs; and

5. quality, reliability and security of supply - what is the impact of the proposed arrangements, in particular, expanding the possible suppliers of NSCAS, for reliability and security of supply.

The proposed Rule will be assessed against the existing arrangements, which are the current provisions in the Rules.

5 Issues for Consultation

Bearing in mind the assessment framework and potential requirements to implement the proposed Rule change, we have identified a number of issues for consultation that appear to be relevant to this Rule Change Request.

The issues outlined below are provided for guidance. Stakeholders are encouraged to comment on these issues as well as any other aspect of the Rule Change Request or this paper.

5.1 Procurement and planning

AEMO has proposed that TNSPs have the primary responsibility for procuring NSCAS. The need for NSCAS would be identified in the NTNDP. AEMO would only procure NSCAS when a NSCAS need had been identified in the NTNDP and remained unmet for 18 months.

AEMO has proposed these procurement and planning arrangements because it considers the existing arrangements lead to TNSPs procuring less NSCS than is required.[15] In addition, AEMO considers that the existing arrangements lack an integrated national planning focus.[16]

For assessment purposes we have separated the planning and procurement of NSCAS into its two main elements, NSCAS for system security and NSCAS for economic benefits.

5.1.1 NSCAS for system security

TNSPs have planning and operating obligations to ensure security of supply and that the network is robust to credible contingencies.[17] These obligations and standards are included in various jurisdictional planning obligations, Rule obligations and licence conditions. 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.[18] This has meant that AEMO will procure 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.[19]

15 AEMO Rule Change Request, p. 18.

16 Ibid.

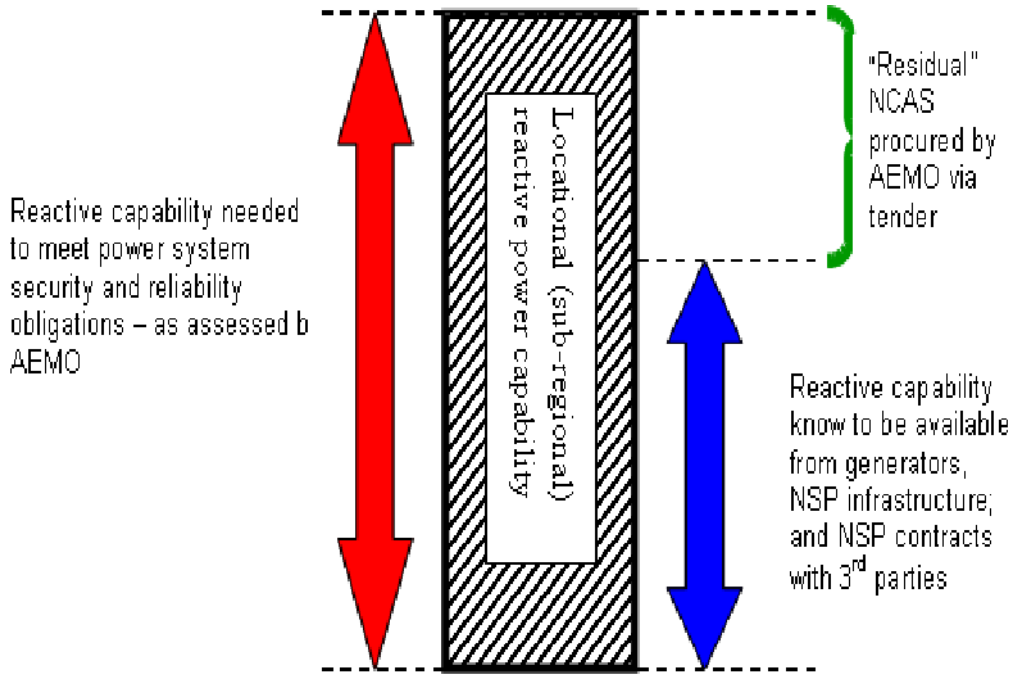
17 Schedules 5.1 and 5.1a of the Rules.

18 Clause 4.3.1(k) of the Rules.

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

The figure below illustrates the relationship between NSCS procured by TNSPs and AEMO.

Figure 5.1 AEMO's reactive power capability procurement decision



AEMO contends that one of the reasons a gap exists between what TNSPs procure and what AEMO deems as necessary for system security reasons is that TNSPs may believe only AEMO is permitted to procure NCAS.[20] As a result of this belief, TNSPs do not plan to address the underlying NCAS requirement through their own regulated investment process.[21]

AEMO proposes to overcome the problem of TNSPs procuring insufficient NSCS by clarifying that both TNSPs and AEMO acquire NSCAS. In addition, AEMO has proposed that its assessment of a NSCAS need is planned through the NTNDP.

Under the proposed framework AEMO's ability to tender for NSCAS is linked to the planning framework. First, 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. This is the case even if AEMO identifies a NSCAS need that would not be addressed by TNSPs within that period. There is a possibility that this constraint may limit AEMO's ability to achieve its security of supply obligations.

It is relevant to consider the consistency between the proposed arrangements for NSCAS with those that already exist for network planning. Under the existing framework, where projects identified in the NTNDP are not undertaken, the safety net arrangement is the Last Resort Planning Power (LRPP). Under the LRPPs, TNSPs can

20 AEMO Rule Change Request, p. 18.

21 AEMO also cites that different standards between TNSPs and AEMO may be factor. However, this was considered outside the scope of the NSCS Review.

be directed by the AEMC to undertake a Regulatory Investment Test for Transmission (RIT-T).[22] However, this framework does not compel TNSPs to undertake the project. Therefore, if the project is not undertaken by a TNSP it remains unmet. In the context of system security there are legitimate reasons why a more robust safety net may be required. However, as will be explained in the following section, applying the proposed framework in the context of network support services for economic benefit may have other implications.

Question Box 1

1.1 How, and to what extent, do the existing arrangements lead to the inefficient procurement and planning of network control services for system security and reliability purposes?

1.2 Do the proposed arrangements encourage the efficient procurement and planning of network control services for system security and reliability purposes?

1.3 Are the proposed roles for AEMO and TNSPs appropriate with respect to system security and reliability?

1.4 Are the planning and procurement arrangements suitability flexible to allow AEMO to meet its system security and reliability obligations?

5.1.2 NSCAS for economic benefit

TNSPs do not have specific obligations to undertake projects for market benefits. Instead, TNSPs will procure network support services on the basis of the incentives they face in the economic regulation framework. For instance, TNSPs have a service incentive scheme that encourages them to provide greater reliability of the transmission system at times when transmission network users place greatest value on the reliability of the transmission system. It 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.[23] In addition, TNSPs are required to consider market benefits when undertaking the RIT-T.[24]

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 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

22 Clause 5.6.4(c) of the Rules.

23 Clause 6A.7.4(b) of the Rules.

24 Clause 5.6.5B(b) of the Rules.

market.[25] In addition, we note that the Non-Market Ancillary Services (NMAS) Operating Procedure states that, with respect to network loading control, if the market benefit exceeds the service enabling cost then the service should be enabled.[26]

An implication of the proposed Rule is that if a TNSP fails to invest in market benefits projects, AEMO will then be required to procure these network support services. 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.[27]Allowing AEMO to procure 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.

Question Box 2

2.1 How, and to what extent, do the existing arrangements lead to the inefficient procurement and planning of network control services for economic benefit?

2.2 Do the proposed arrangements encourage the efficient procurement and planning of network control services for economic benefit?

2.3 Are the proposed roles for AEMO and TNSPs appropriate with respect to delivering wider economic benefits from network services?

5.2 Definition and objective of NSCAS

The existing definition of NCAS is as follows:

> "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.[28]"

25 Clause 3.11.4(b) of the Rules.

26 AEMO, *Operating Procedure, Non-Market Ancillary Services*, 1 July 2009, p. 9.

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

28 Definition of Network Control Ancillary Services, Chapter 10 of the Rules.

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. where practicable to enhance 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 contends 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 RIT-T.[29] AEMO also contends that the existing arrangements create ambiguity due to multiple objectives. AEMO states 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.[30]

AEMO has proposed to introduce a new defined term 'NSCAS'. NSCAS is described as a service that controls active or reactive flows to assist in maintaining a secure transmission network or to maintain or increase its power transfer capability. AEMO has also proposed a new objective for NSCAS, referred to as a 'NSCAS need'. A NSCAS need is described 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

- to 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 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. The proposed description of a 'NSCAS need' also includes a description of how NSCAS should be used. 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 definition and objective 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 proposed definition and objective appear to focus more on longer term planning objectives. Some considerations relevant to a broader definition and objective include:

29 AEMO Rule Change Request, p. 14.

30 Ibid.

- interaction between existing obligations and incentives - as noted above, AEMO and TNSPs already have planning obligations and incentives related to system security, and in the case of TNSPs, incentives to develop market benefits solutions. Therefore, it is important that the definition and objectives of NSCAS are clear about how they are distinct, or additive, to these existing objectives and incentives; and

- ensuring efficient levels of NSCAS are procured - a broader definition may increase the scope for more NSCAS being procured than is necessary. This is because there may be a prospect of parties interpreting the requirements differently.

Question Box 3

3.1 Does the existing definition and objective of NCAS accurately describe the service and encourage efficient quantities of NSCS being procured?

3.2 Does the proposed definition of NSCAS accurately describe the service?

3.3 Will the proposed description of a NSCAS need encourage efficient quantities of NSCAS being procured?

3.4 Does the apparent duplication between the definition and objective of NSCAS impact on efficient outcomes occurring?

3.5 Is there inefficient duplication, or overlap, between existing service obligations on TNSPs and AEMO and the proposed definition and objectives for NSCAS?

5.3 Provision of NSCAS

The existing arrangements limit the potential providers that can tender to AEMO to provide NCAS to Registered Participants.[31] The arrangements also exclude TNSPs from tendering to AEMO for reactive power ancillary services as consequence of the technical specifications in AEMO's NCAS Description.[32]

AEMO considers that widening the range of service providers would in many cases encourage greater competition and reduce the price of the service.[33] 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 documents.

31 3.11.5(j) of the Rules.

32 AEMO, *Network Control Ancillary Service Description*, July 2009.

33 AEMO Rule Change Request, p. 18.

Allowing TNSPs, through relevant AEMO procedures or guidelines, to tender for the provision of NSCAS may have implications that could impact on efficient outcomes. First, TNSPs would already have had an 18 month period to signal their intention to provide the service. Allowing TNSPs a further opportunity to tender to AEMO to provide NSCAS may distort incentives between providing the service under a regulated framework relative to a competitive framework. Second, 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.

As noted, the proposed Rule would allow parties that are not Registered Participants to provide NSCAS. 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 NCAS is provided in a safe and secure manner.[34] AEMO has acknowledged that additional arrangements will be required for non-Registered Participants to provide NSCAS. Therefore, AEMO has proposed that these obligations and standards will form part of the tender documents and will, as a result, be formalised in contracts with successful NSCAS providers. It is important to ensure that this proposed arrangement would not adversely impact on system security or reliability outcomes and does not reduce any necessary transparency that is provided by the Rule provisions.

Question Box 4

4.1 How, and to what extent, do the existing arrangements create a barrier to entry for possible providers of NSCAS?

4.2 If barriers exist, do the proposed arrangements adequately remove the barriers to possible providers of NSCAS providing the service?

4.3 Are there any implications for efficient outcomes from allowing TNSPs to tender to AEMO to provide NSCAS?

4.4 Are the proposed arrangements for managing the technical requirements for non-Registered Participants adequate for maintaining a safe and secure electricity system?

5.4 Deployment of NSCAS

AEMO states that TNSPs are not presently obliged to provide it with information about network support agreements they may have.[35] AEMO considers that this arrangement diminishes its ability to achieve its power system security obligations

34 Clause 3.11.7 of the Rules.

35 AEMO Rule Change Request, p. 27.

through the central dispatch and Projected Assessment of System Adequacy (PASA) outcomes.[36]

AEMO has proposed that Network Service Providers (NSPs) be obliged to update it with relevant information on their NSCAS provided under network support agreements.

Information provided about network support agreements may reveal information that is commercially sensitive to the provider of network support. While the information in this instance is only provided to AEMO, it is important to ensure that AEMO's use of the information does not disclose to third parties sensitive or confidential information.

TNSPs may not have information about NSCAS needs outside of their immediate network boundaries. However, it is possible that NSCAS within one network region may be suitable to address a need in an adjoining region. If a TNSP is not aware of, or able to draw upon, NSCAS contained within another region, it may mean that the NSCAS it has to deploy is not the most efficient source of network support or network control.

Question Box 5

5.1 How, and to what extent, do the existing information provision arrangements diminish AEMO's ability to achieve its power system security obligations?

5.2 Are there any confidentiality concerns associated with information provided by TNSPs and AEMO?

5.3 Do TNSPs and AEMO have sufficient information to make informed decisions about deploying NSCAS?

5.5 Funding and cost recovery of NSCAS

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

- NSCS procured by TNSPs are recovered from users of their networks through the TNSP's regulated transmission charges;[37]and
- NSCS procured by AEMO are recovered from all Market Customers in the NEM on a pro-rata basis through market charges.[38]

36 Ibid.

37 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.

38 Clause 3.15.6A(c) of the Rules.

AEMO consider the existing cost recovery arrangements for NCAS it procures are inappropriate because service costs are not recovered from those receiving the benefit.[39] AEMO has proposed that costs for NSCAS procured by it should be recovered from Market Customers in benefiting regions on the basis of the proposed Regulation 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. 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 procure during a regulatory control period, but during the regulatory control period the TNSP could instead provide the service competitively to AEMO under tender. Without additional qualifications in the Rules this could create a circumstance where a TNSP gets paid twice for providing NSCAS.

Question Box 6

6.1 Do the existing arrangements efficiently allocate costs to the appropriate parties?

6.2 If not, do the proposed cost recovery arrangements efficiently allocate costs to parties?

6.3 Are there any implications associated with the interaction between regulated and competitive revenue with respect to TNSPs?

5.6 Other issues

We have identified two other issues that are not directly related to the individual issues identified above. These issues relate to the guidance provided for the development of procedures and guidelines, and any transitional arrangements that may be necessary.

5.6.1 Guidance for procedures

There a number of procedures and guidelines relevant to AEMO's proposed NSCAS arrangements, including the following:

- NSCAS description;
- NSCAS quantity procedure;
- NMAS tender guidelines;
- System Restart Ancillary Services (SRAS) assessment guidelines;
- NSCAS dispatch guidelines; and

39 AEMO Rule Change Request, p. 30.

- regional benefit ancillary services procedures.

Guidelines and procedures are used to contain technical procedural requirements of a practical and operational nature. Guidelines and procedures are intended to assist market participants and interested parties on the detailed principles and processes central bodies such as AEMO will apply when considering issues or developing outcomes. In relation to these areas of discretion for AEMO, a relevant consideration is how much guidance there should be in the Rules for the development of AEMO's guidelines and procedures.

Question Box 7

7.1 Is the guidance provided to AEMO in relation to the relevant guidelines and procedures appropriate?

5.6.2 Transitional arrangements

AEMO's existing NCAS contracts are due to expire on 30 June 2010. These contracts have an option for extension until 30 June 2012. According to AEMO, if the proposed Rule is not made before September 2010 the first NSCAS needs assessment would be contained in the 2011 NTNDP. TNSPs would then have a further 18 months to address those needs and if they do not do so, AEMO would issue the notice proposed in clause 3.11.3 and give TNSPs a further 30 days to respond. This means that the existing contracts, even with the extension applied, would expire before AEMO had a further opportunity to procure network support or control services. As a consequence, it is likely that some transitional arrangements may be necessary to ensure that AEMO is able to meet its system security obligations in the period between the end of the existing NCAS contracts and the earliest period it could enter into new contracts under the arrangements contemplated in its Rule.

Question Box 8

8.1 Are transitional arrangements required for AEMO to procure network support and control services, and if so, what should these transitional arrangements be?

6 Lodging a Submissions

The Commission has published a notice under section 95 of the NEL for this Rule change proposal inviting written submission. Submissions are to be lodged online or by mail by 3 September 2010 in accordance with the following requirements.

Where practicable, submissions should be prepared in accordance with the Commission's Guidelines for making written submissions on Rule change proposals.[40] The Commission publishes all submissions on its website subject to a claim of confidentiality.

All enquiries on this project should be addressed to Scott Stacey on (02) 8296 7800.

6.1 Lodging a submission electronically

Electronic submissions must be lodged online via the Commission's website, www.aemc.gov.au, using the "lodge a submission" function and selecting the project reference code ["ERC0108"]. The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated.

Upon receipt of the electronic submission, the Commission will issue a confirmation email. If this confirmation email is not received within 3 business days, it is the submitter's responsibility to ensure the submission has been delivered successfully.

6.2 Lodging a submission by mail

The submission must be on letterhead (if submitted on behalf of an organisation), signed and dated. The submission should be sent by mail to:

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Or by Fax to (02) 8296 7899.

The envelope must be clearly marked with the project reference code: ERC0108.

Except in circumstances where the submission has been received electronically, upon receipt of the hardcopy submission the Commission will issue a confirmation letter.

If this confirmation letter is not received within 3 business days, it is the submitter's responsibility to ensure successful delivery of the submission has occurred.

40 This guideline is available on the Commission's website.

Abbreviations

ACCC	Australian Competition & Consumer Commission
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
Commission	See AEMC
LRPP	Last Resort Planning Power
MCE	Ministerial Council on Energy
NCAS	Network Control Ancillary Services
NECA	National Electricity Code Administrator
NEL	National Electricity Law
NEM	National Electricity Market
NEMMCO	National Energy Market Management Company
NEO	National Electricity Objective
NGF	National Generators Forum
NLCAS	Network Loading Control Ancillary Services
NMAS	Non-Market Ancillary Services
NSCAS	network support and control ancillary services
NSCS	Network Support and Control Services
NSPs	Network Service Providers
NTNDP	National Transmission Network Development Plan
PASA	Projected Assessment of System Adequacy
RIT-T	Regulatory Investment Test for Transmission
SRAS	System Restart Ancillary Services

TNSP	Transmission Network Service Providers

A Summary of the Network Support and Control Services Review

The purpose of this appendix is to describe the background to the NSCS Review and to provide a summary of each of the documents AEMO published as part of the Review. For each publication it summaries the purpose of the document and the key points, or issues, raised in the document. Where relevant, stakeholder comments on relevant issues are identified.

A.1 Purpose of NSCS Review

NEMMCO, and then AEMO, was obliged under the Rules clause 3.1.4(a1)(4) to conduct a review into the provision of Network Control Ancillary Services (NCAS) in consultation with Registered Participants, Intending Participants and interested parties (the Review). This review was to include:

- a review of the responsibilities of AEMO 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 implementation of markets for recruiting and dispatching NCAS.

AEMO was obliged to deliver to the AEMC any Rule change requests resulting from the review within three months of the conclusion of the review. The remainder of this paper will now summarise the various papers published for the review.

A.2 Draft Scoping Paper

Draft and Final Scoping Papers[41] were released before the formal commencement of the NSCS Review. The Draft Scoping Paper was published on 7 March 2008.

The purpose of the Draft Scoping Paper was to lay out the proposed scope for the NSCS Review by:

- describing the arrangements for procuring and dispatching reactive power and other network support services; and
- seeking stakeholder views on the proposed scope for the NSCS review and other matters needing to be addressed.

41 NEMMCO, *Review of Network Support & Control Services: Final Scoping Paper*, 2 June 2008.

A.2.1 Key points

In the Draft Scoping Paper NEMMCO proposed to undertake a review that was broader than that required under the Rules. Instead of considering only NCAS, NEMMCO considered it should review the full suite of NSCS. Broadening the review allowed NEMMCO to consider services procured and delivered by TNSPs and NEMMCO. 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 are considered at the same time.

NEMMCO proposed that the review cover the following five areas:

- *Responsibility for procuring NSCS and cost recovery* - The efficient procurement of NSCS and delivery of network capability may be affected by the clarity of the respective responsibilities of NEMMCO and TNSPs to procure NSCS, both between NEMMCO and TNSPs, and between individual TNSPs. The review was also to consider likely consequences of having two different cost-recovery mechanisms for procuring NSCS: regional cost-recovery through transmission charges for TNSP-procured NSCS, and NEM-wide smeared cost-recovery from Market Customers for NEMMCO-procured NCAS.

- *Substitutability of NSCS* - Having a range of mechanisms providing a particular service, and having a particular mechanism being able to provide a range of services, may have consequences for the efficient procurement of NSCS and delivery of network capability.

- *Barriers to entry for NSCS providers* - Barriers to entry for NSCS providers may affect the efficient procurement and deployment of NSCS. The review was to examine whether any inappropriate barriers to entry in the market for NCAS and NSCS were present or likely to emerge.

- *Use and deployment of NSCS* - It may be possible to achieve more efficient NSCS deployment by improving decision-making relating to trading-off the benefits and costs of dispatching NSCS. The review was to examine whether this could be improved by better integrating NSCS deployment into the central dispatch processes or through other deployment methods. It was also to examine how network constraint equations in central dispatch which depend on the provision of NCAS are formulated.

- *Types of NSCS markets* - The Review was to examine the potential for using real-time NSCS markets as alternatives to bilateral contracting.

NEMMCO also sought feedback from stakeholders about whether any additional areas should be covered in the review.

A.3 Final Scoping Paper - released 2 June 2008

The Final Scoping Paper was published on 2 June 2008. The purpose of the Final Scoping Paper[42] was to finalise the scope of the NSCS Review.

A.3.1 Key points

Stakeholders were largely supportive of the proposed scope of the NSCS Review as presented in the Draft Scoping Paper. Some stakeholders supported expanding the review in different areas, including distinct procurement of reactive power, and more focus on demand-side participation. Following NEMMCO's consideration of submissions, the Final Scoping Paper confirmed the scope of the NSCS Review as presented in the Draft Scoping Paper subject to two comments:

- the NSCS Review should be forward-looking in terms of taking account of likely changes in the mix of power system technologies and processes resulting from climate change policies and the impact of those changes on efficiently maintaining power system security in relation to transmission network support and control; and
- the NSCS Review should examine overseas practice in procuring and delivering transmission network support and control services.

In the Final Scoping Paper NEMMCO noted that a number of stakeholder suggestions were covered in the draft scope.

A.4 Issues and Options Discussion Paper

The NSCS Review formally commenced with the release of the Issues and Options Discussion Paper on 29 July 2008.[43] The purpose of the Issues and Options Discussion Paper was to:

- describe the existing arrangements for the procurement, deployment and provision of Network Support and Control Services in the NEM;
- identify issues with the existing arrangements; and
- consult on options to address any issues with the existing arrangements.

A.4.1 Key points

Key issues NEMMCO identified regarding the existing arrangements and options to address them were as follows.

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42 NEMMCO, *Review of Network Support & Control Services: Final Scoping Paper*, 6 March 2008.

43 NEMMCO, *Review of Network Support & Control Services: Issues & Options Discussion Paper*, 29 July 2008.

Definition of NCAS

NCAS had been defined in the Rules to be services either maintaining the transmission network within its secure operating limits following a credible contingency event *or* enhancing the value of spot market trading.

NEMMCO stated that submissions had supported a broader, more outcome-focussed definition in the Rules. The purpose would be to encourage a greater pool of provision options and potentially increase the scope for technological and commercial innovation.

NEMMCO proposed to rename NCAS as Network Support and Control Services and to alter their definition to be: services controlling the flow of active or reactive power in order to enhance the value of spot market trading (possibly with reference to an undefined network capability objective) while maintaining the transmission network within its secure operating limits following a credible contingency event.[44] NEMMCO stated that this broader definition would provide a clear framework for efficiently dispatching NCAS.

Substitutability of NSCS

The efficient procurement and deployment of NSCS may be impacted by service substitutability, i.e. several mechanisms being able to deliver the same service or a single mechanism being able to provide different services.

An example of substitutability is that reactive power support can be procured by NEMMCO or obtained from TNSPs via their assets or contracts with third parties.

NEMMCO considered that the efficiency of a mechanism providing a range of network support and control services may be reduced if its use is not properly cooptimised. NEMMCO considered this was particularly the case where services were provided to different parties.

Service procurement

NEMMCO considered that sharing the planning and procurement of NSCS between it and TNSPs may result in inefficient procurement and service delivery. This was perceived to be due to potentially inconsistent planning standards, inconsistent assessments of potential services, and different cost recovery mechanisms. These inconsistencies may be between NEMMCO and TNSPs, and between individual TNSPs (e.g. due to different TNSP license conditions).

NEMMCO also identified that the allocation of responsibilities for procuring services that provided inter-regional benefits was unclear.

NEMMCO found that the different procurement regimes may lead to service providers attempting to game procurement regime. For example, a generator may decide not to

44 NEMMCO, *Review of Network Support & Control Services: Issues & Options Discussion Paper*, 29 July 2008, p.46.

provide network support services to a TNSP in the aim of obtaining greater unregulated revenues through an NCAS contract with NEMMCO.

NEMMCO identified that a potential remedy to these issues would be for it to relinquish its NSCS procurement role, leaving the role exclusively to TNSPs.

NSCS deployment

NEMMCO considered that fully cooptimising NSCS deployment in the central dispatch process would, in principle, improve the efficiency of its deployment. However, integrating it into the dispatch process may be difficult for technical reasons. These reasons included the need to use integer programming in the dispatch engine, and the need to notify some service providers in advance of using them.

Cost recovery

The Issues and Options paper identified that the efficiency of NSCS provision will be impacted by the way in which the procurement costs are recovered, and in particular, the connection between cost recovery and service provision.

TNSPs recover their NSCS procurement costs through transmission charges in their own regions, while NEMMCO recovers its NCAS costs from Market Customers on a smeared basis across the NEM.

NEMMCO considered that TNSPs may be indifferent to the relatively high costs of NCAS procurement. While broadly smearing cost recovery may mute locational signals for efficient network investment.

Barriers to market entry of service providers

NEMMCO considered that restrictions on the parties and services that can provide NCAS to it, and the limited NCAS tender timeframes and durations of NCAS contracts, may lead to inefficient NCAS procurement and service delivery. Some factors may effectively hinder broader participation in NCAS tenders, including allowing only Registered Participants to tender, restricting technology types (to generators/synchronous condenser for reactive power support and load shedding for Network Loading Control Ancillary Services (NLCAS), and limited tender timeframes.

Options that were identified to address these barriers included removing the requirement that only Registered Participants could tender to provide NCAS, and having less restrictive tendering / contract lengths.

The paper did not explore whether there were barriers to entry for NSCS provided by or procured by TNSPs. This was because there had been a number of recent reforms to the Regulatory Test and the economic regulation of transmission revenues. On this basis, NEMMCO considered that those reforms should first be allowed to become better integrated into the planning and economic regulation processes.

Types of NSCS markets

The NSCS Review was to examine alternatives to the existing bilateral NSCS contracting, including real-time markets. Aspects of this included the extent to which NSCS costs could be unbundled from energy costs and the design of real-time NSCS markets.

A.5 Draft Determination Report

The Draft Determination, published on 25 November 2008,[45] laid out NEMMCO's assessment of the problems with the existing arrangements and its proposed recommendations to overcome these problems.

A.5.1 Key points

The key elements of the Draft Determination were as follows.

Definition of NSCS

NEMMCO proposed to broaden the definition of network control ancillary services and rename them as *Network Support and Control Services*. Under the amended definition they would be services maximising the net economic benefit by maintaining or increasing power transfer capability while maintaining the network in a secure operating state.[46]

This followed submissions on the Issues and Options Discussion Paper which had generally supported the then-proposed redefinition of NSCS (which was more narrowly focussed on spot market benefits). Hydro Tasmania had suggested expanding the definition to include net market benefits, expressing concern that TNSPs may find it difficult to determine spot market benefits. NEMMCO agreed with Hydro Tasmania and changed the proposed definition to reflect the then Regulatory Test objective.

Substitutability of NSCS

Submissions by the National Generators Forum (NGF) and TRUenergy considered that the potential for double-dipping (and failure to provide a service) by NSCS providers could be managed by the use of appropriate contracts. NEMMCO considered that TNSPs would be responsible for addressing any double-accounting of NSCS contracted to them and that the Rules provided it with adequate cover to avoid double-dipping.

NSCS planning and procurement

45 NEMMCO, *Review of Network Support & Control Services: Draft Determination Report*, 25 November 2008.

46 NEMMCO, *Review of Network Support & Control Services: Draft Determination Report*, 25 November 2008, p.41.

Submissions on the Issues and Options Discussion Paper had split views on whether NEMMCO should relinquish its NCAS responsibilities to TNSPs. Grid Australia, Transend, Hydro Tasmania, and TRUenergy supported NEMMCO relinquishing this role, while the NGF rejected any change.

In the Draft Determination, NEMMCO proposed that it should relinquish its NCAS planning and procuring role to TNSPs, following its comparison of the merits of the existing shared planning/procurement arrangements with NEMMCO-only and TNSP-only approaches.

NEMMCO also considered that clause (3.11.3(b)(1)) of the Rules, allowing it to impose minimum technical ancillary service standards, and requiring TNSPs to enter into ancillary service agreements with Registered Participants connecting to the TNSP's network, was redundant. This was because the minimum technical ancillary service standards were already captured in technical connection standards.

NSCS deployment

Submissions did not address this issue, and NEMMCO considered that no changes were needed to the formulation of network constraint equations or how NCAS was dispatched. This was because incorporating NCAS into the dispatch processes would require fundamental changes to the dispatch engine including introducing mixed integer programming.

However, NEMMCO did propose a Rule change to oblige TNSPs to provide it with information about network support services they contract. This was because NEMMCO stated that the Rules were unclear on the type of information TNSPs must provide to NEMMCO.

NSCS cost recovery

Following a submission from TRUenergy which supported regionalised NCAS cost recovery, and one from the NGF drawing attention to potential issues with recovering costs on a regional basis, NEMMCO did not recommend changes to the arrangements for recovering NCAS costs. The reason for this was that although NEMMCO did consider smearing costs across all Market Customers was inefficient, as it was proposing to relinquish its NCAS planning and procurement role to TNSPs, it could not justify changes to cover the period up until it relinquished its role.

Barriers to market entry

The NGF submission raised concerns about potential TNSP participation in NCAS tenders, suggesting that services should be defined in terms of outputs and not technologies and that there could be longer contracts. TRUenergy's submission suggested a need for greater information from TNSPs as well as competitive neutrality for non-regulated NSCS providers compared to other providers. NEMMCO, however, proposed no changes to improve participation of service providers in TNSPs' planning and procurement of NSCS. This was because NEMMCO considered that the reforms relating to transmission planning (including the National Transmission Planner and

the RIT-T) should be given time to become properly integrated in the planning arrangements. The NGF had raised concerns that the administration of transmission investments by TNSPs may lead to barriers to generators and others providing NSCS.

NEMMCO also proposed no changes relating to NEMMCO's procurement of NCAS as it was proposing to relinquish its NCAS planning and procurement role to TNSPs.

Types of NSCS markets

NEMMCO proposed continuing the bilateral contracting of NSCS and not introducing spot markets in generator reactive power and NLCAS. This followed submissions from the NGF and TRUenergy which highlighted the limited value in considering real-time NCAS markets given the relatively small NCAS market and physical limitations of NCAS products, and the appropriateness of bilateral contracts given NSCS is location-specific. The reason for NEMMCO's proposal was that the costs of implementing spot markets and cooptimising reactive and active power would likely outweigh the benefits.

Other issues

In their submissions, Transend and Hydro Tasmania had commented on the emerging issues of power system instability associated with an increasing penetration of relatively low-inertia wind generation. NEMMCO proposed keeping a watching brief on the relevant issues through the AEMC's Review of Energy Market Frameworks in light of Climate Change Policies. NEMMCO indicated that it would participate in the review as required.

A.6 Revised Draft Determination Report

Following NEMMCO's analysis of submissions on the Draft Determination, it decided it would publish a Revised Draft Determination and defer the publication of the Final Determination until after the commencement of AEMO on 1 July 2009. AEMO published a Revised Draft Determination on 12 October 2009.[47] The recommendations in the Draft Determination were, as a consequence, superseded by those in the Revised Draft Determination.

A.6.1 Key points

The key points of the Revised Draft Determination Report were as follows.

Definition of NSCS

The proposed definition of NSCS was largely as given in the Draft Determination. Although, NEMMCO now proposed to retain a separate definition of NCAS being NSCS procured by AEMO. The Australian Energy Regulator (AER) had commented on

47 AEMO, *Review of Network Support & Control Services: Revised Draft Determination Report*, 12 October 2009.

the proposal in the Draft Determination in which it objected to replacing the spot market trading objective with a net market benefits objective as this would weaken the goal behind introducing that provision in 2002 (which was according to the AER to engender spot market trading benefits).

Substitutability of NSCS

This issue was not directly addressed in the Revised Draft Determination.

NSCS planning and procurement

AEMO's new proposal was significantly different from that in the Draft Determination. The NGF had strongly criticised NEMMCO's proposal to relinquish its NCAS planning and procurement role on the basis that it had not been justified and that it would strengthen the potential conflict of interest towards regulated investments. On the other hand, Grid Australia supported NEMMCO's proposal noting that it would clarify responsibilities for procuring and dispatching NSCS. The AER expressed concern about whether TNSPs would have incentives to procure NSCS efficiently and whether NSCS planning would operate effectively in the absence of a market-wide planning function.

AEMO stated that its revised proposal took into account stakeholder views and its new operating role and functions, including the National Transmission Planner function. AEMO's new proposal was for it to undertake some NSCS planning and to be the fallback NSCS procurer.

AEMO proposed it would first identify the following matters in its annual National Transmission Network Development Plan (NTNDP):

- power system security issues relating to the transmission network to meet its safety net obligation;
- minimum levels of secure power transfer capability on current and potential National Transmission Flow Pathways required to maintain customer supply reliability; and
- above-minimum levels of secure power transfer capability on current and potential NTFPs that may deliver additional net market benefits beyond customer supply reliability.

AEMO would conduct a needs analysis with a minimum five-year horizon and develop preferred options under the RIT-T principles. It would act as a fallback procurer using an open tender process where a need was identified, persists, and was reported in two consecutive NTNDPs.

AEMO retained its proposal in the Draft Determination to remove the clauses in the Rules allowing it to impose minimum technical ancillary service standards for connection. The AER had objected to this proposal in the Draft Determination as it

considered that it may be prudent to allow AEMO to impose minimum technical standards.

NSCS deployment

Submissions did not address this issue and AEMO's proposal was unchanged from the Draft Determination.

Service cost recovery

AEMO proposed to recover costs on a causer pays or region beneficiaries basis where practicable. This change to its proposal in the Draft Determination reflected its recommendation to retain an amended NCAS planning and procurement role and its earlier concerns regarding the efficiency of smearing NCAS recovery costs across NEM Market Customers.

Other issues

Transend, Grid Australia and the AER submitted that inertia support services required attention. AEMO noted that it was closely involved in workstreams reviewing emerging inertia issues.

A.7 Final Determination Report - released 18 December 2009

The Final Determination[48] was published on 18 December 2009 and laid out AEMO's final recommendations for changes to the arrangements for NSCS. The recommendations in the Final Determination were substantially similar to the proposals in the Revised Draft Determination.

A.7.1 Key points

The key elements of the Final Determination were as follows.

Definition of NSCS

AEMO's proposed new definition of NSCS was unchanged from the Revised Draft Determination. However, AEMO stated that it would further consult with stakeholders on developing guidelines on how to dispatch NSCS to realise net market benefits of enhanced power transfer capability. This followed AER comments that replacing the spot market trading objective with a net market benefits objective raised detailed implementation issues.

Hydro Tasmania had generally supported a broader definition of NSCS while the NGF was concerned that broadening the definition would result in NSCS being biased towards network assets.

Substitutability of NSCS

48 AEMO, *Review of Network Support & Control Services: Final Determination Report*, 18 December 2009.

This issue was not directly addressed in the Final Determination.

NSCS planning and procurement

The proposed new arrangements for planning and procurement were largely unchanged from the Revised Draft Determination. The AER, Hydro Tasmania and the NGF generally supported the proposals. However, Grid Australia considered in its submission to the Revised Draft Determination that AEMO's involvement in procuring NSCS would be inconsistent with the Ministerial Council on Energy's (MCE) preferred policy direction that accountability for network service investment should remain with TNSPs.

The NGF was concerned about TNSPs' involvement in AEMO's NSCS tendering. It considered that it might result in moral hazard. That is, TNSPs not making regulated investments to pursue more attractive unregulated returns from AEMO. The NGF was also concerned about the prospects for double-dipping of revenues. The NGF submission to the Revised Draft Determination questioned how AEMO would assess different services against the proposed net market benefits test and that existing contracted services may not be contracted under the new test.

AEMO also confirmed its proposal to remove Rules clauses allowing it to impose minimum technical ancillary service standards for connection as it considered the provisions were redundant. This had been supported by the NGF.

NSCS deployment

The proposed arrangements were largely unchanged from the Revised Draft Determination. However, in light of the Grid Australia submission to the Revised Draft Determination, AEMO stated it would work with Grid Australia to refine the information TNSPs would be obliged to provide it relating to their network support services. Hydro Tasmania had supported improved TNSP provision of information.

Service cost recovery

AEMO proposed to recover its NSCS costs from Market Customers on a "region beneficiaries" basis. This followed submissions from the AER supporting its proposal to adopt a general principle of beneficiary or causer pays, and Hydro Tasmania's support for cost-recovery from benefiting parties.

Other issues

AEMO proposed that it would decide whether to coordinate reviews of arrangements for inertia for regions in mainland Australia subject to the outcomes of its periodic monitoring of the potential effect on power system security of the expanded Renewable Energy Target and the Carbon Pollution Reduction Scheme. This NGF and Hydro Tasmania had expressed concern at the arrangements for supporting inertia.