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3rd September 2010

Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Submission by website, project reference: ERC0108

Dear Sir / Madam,

Submission to Consultation Paper - National Electricity Amendment (Network Support & Control Ancillary Services) Rule 2010

The NGF has commissioned Deloitte to undertake a critique of the proposed Rule change. This critique forms part of the NGF submission. In summary Deloitte believe:

1. The proposed arrangements are an improvement to existing arrangements provided two key assumptions are met. These being: (1) the RIT-T test is applied in an unbiased way and does not favour network over non-network solutions (2) the NTNDP meets the information requirements of all stakeholders involved with NSCAS planning and procurement;

2. There remains unclear accountability and responsibility for procuring inter-regional network capability. The existing Rules should be strengthened to make clear whose responsibility and accountability it is to procure network services that utilise existing inter-regional transfer capability as far as economic. The NGF notes that inter-regional issues are inherently difficult for TNSPs as they transcend TNSP boundaries and therefore suggests that there is a particular case for greater AEMO involvement in planning and procurement for the case of inter-connectors;

3. A greater level of communication is required between AEMO and TNSPs respective planning and procurement processes to ensure that there are no gaps in the planning and procurement of an efficient amount of NSCAS; and

4. Mandatory provision of reactive services does not lead to efficient outcomes.

This submission outlines the NGF's responses to the question boxes outlined in the consultation paper. Where relevant the NGF has referenced specific comments made by Deloitte in their critique of the proposed Rule change.

The NGF appreciates the opportunity to comment. For further information in relation to this submission please call Kevin Ly on (02) 9278 1862.

Yours sincerely

Malcolm Roberts
Executive Director

Responses to 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?

AEMO has proposed new procurement and planning arrangements because it considers the existing arrangements lead to TNSPs procuring less (Network Support and Control Ancillary Services (NSCAS) than is required. The NGF asserts that there's no evidence to suggest that existing arrangements are inefficient. AEMO have made the assumption that just because the TNSPs are not purchasing all the required NSCAS that the current arrangements are inefficient.

There may be legitimate reasons why TNSPs have not purchased all the required NSCAS. These services may simply be uneconomic, and/or the TNSP has not recognised the need for additional services.

The NGF is concerned by assertions that the price AEMO pays for these services is uneconomic. A valid comparison of all network services must take into account the basis of pricing of that particular service. The pricing associated with each service could be divided into three categories, these being (1) an availability payment, (2) an enablement payment, and (3) a dispatch/usage payment. The NGF has highlighted an example where if these factors are not properly assessed would lead to AEMO wrongly assessing one service are being more cost effective than a rival service[1].

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

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 two (2) successive National Transmission Network Development Plans (NTNDPs) and remained unmet for 18 months.

The proposed arrangements are heavily dependent on the information provided in the AEMO's NTNDP. The first scheduled publication of this report is due late this year. Depending on how meaningful and useful this publication is, would to a large extent dictate the likely success of the proposed new arrangements. To state the obvious, without seeing what the NTNDP produces, stakeholders can only reasonably speculate whether the proposed new arrangements would lead to material improvements on existing arrangements.

The NGF has concerns that the proposed arrangements may adversely affect system security and reliability. These concerns are centred on:

- The change in service definition may favour network investments over other non-network service providers if the application of the RIT-T is not carried out in an unbiased way; and
- The 18 month lead time before AEMO seeks to address a NSCAS need may limit AEMO's ability to achieve its security of supply obligations, and limit its ability to achieve economic enhancements of market dispatch.

With respect to the second dot point, to support this assertion the NGF makes the following observations:

[1] NGF Submission to AEMO Revised Draft Determination, page 3, http://www.aemo.com.au/electricityops/0169-0008.pdf

- The achievement of appropriate service delivery is hugely more important than who delivers them;
- Service delivery wholly by TNSPs is an unproven process and an alternative process is needed;
- The incentives on TNSPs to deliver adequate service are unclear and unproven;
- TNSPs are not involved in the day-to-day dispatch of the market and may be unaware of some of the cases for service provision;
- The planning process of both the National Transmission Planner (NTP) and the TNSP, if they detect the need for a service should do so some time before the need applies; hence if the time when the need for the service is approaching, and the TNSP is not planning to deliver the service, then AEMO should, if it believes the service is justified immediately move to acquire it. Any delay is an unnecessary burden on the market.

In summary the NGF believes that if AEMO identifies a deficiency in network services then it should remedy this situation without delay.

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

Under the current arrangements, the focus of TNSPs is intra-regional and AEMO's focus is inter-regional. This process can be improved through better communication ie. TNSP's disclosing Network Support Agreements for AEMO to input to constraint formulations.

Under the proposed roles it is unclear whether the shift to TNSPs being the primary provider of NSCAS and AEMO being the safety net purchaser of NSCAS would lead to more efficient outcomes.

The NGF notes that even without moving to the proposed arrangements, under existing arrangements the establishment of the NTP and the publication of the NTNDP with details of NSCAS requirements should improve information to the market and should lead to improvements in the current arrangements.

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

As highlighted in section 1.1 there is no evidence to suggest that existing arrangements have not met AEMO's and TNSP's system security and reliability obligations. This assertion is also recognised in the Deloittes report[2].

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. This would not in the interest of consumers and may lead to less procured NSCAS than is optimal.

It is unclear whether the proposed new arrangements would in fact improve system security and reliability obligations as it remains unclear who is responsible and accountable for inter-regional network capability.

[2] Deloitte report, Section 3, page 14

Responses to 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?

The NGF agrees that TNSPs do not have specific obligations to undertake projects for market benefits. The RIT-T only requires TNSPs to **consider** market benefits (emphasis added).

AEMO under current arrangements have obligations to enhance network transfer capability when in AEMO's **reasonable opinion** the increase in network service cost will not exceed the resultant expected increase in the benefits of trade from the Spot market (emphasis added).

It is obvious that neither TNSPs nor AEMO have an explicit obligation to procure network services for economic/market benefit. The NGF believes the Rules should be amended to make clear which party or parties have the accountability and responsibility for the planning and procurement of network control services for economic benefit.

The establishment of the NTP was premised on the recognised gap in the planning of inter-regional network capability. The publication of the NTNDP is intended to fill this gap. The NTP resides within AEMO and hence it would seem appropriate that the accountability and responsibility for planning and procurement of network services that deliver market benefits resides with AEMO.

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

As stated earlier under the proposed arrangements the interaction between AEMO publication of the NTNDP and the TNSP's publication of their Annual Planning Reports (APR) is suppose to fill any gaps that may arise from the insufficient planning and procurement of network control services for economic/market benefit.

However, this arrangement is untested since the initial (full) NTNDP has not been published. Further to this, the issue of who is ultimately responsible to ensure this occurs remains unclear.

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

The answer comes down to who is in the best position to acquire NSCAS that enhances existing inter-regional network capability. The NGF argues that it is AEMO with their NEM wide focus and obligation to publish the National Transmission Network Development Plan who should ultimately be accountable and responsible for delivering wider economic benefit from network services.

Responses to 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?

The Rules explicitly state that NCAS is to be procured and deployed where it enhances spot market trade. To the extent that the new definition (incorporating net market benefits) does not appropriately take into account the market benefits of enhancing the spot market trade (ie. does not recognise wealth transfers) then the new definition may in fact lead to less efficient procurement of network services. Hence whether or not the new definition of NSCAS would encourage efficient quantities of NSCAS depends on the application of the RIT-T.

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

The NGF supports the intent of an outcome based service definition.

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

The new definition may lead to inefficient NSCAS procurement depending on how the wide range of services are valued with respect to the expected availability rates, utilisations rates, and the risk adjusted returns of the service providers. In short it would be entirely dependent on the unbiased application of the RIT-T.

Responses to Question Box 4

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

The NGF in principle supports a wider array of service providers, provided that each are treated on a competitively neutral basis.

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

The proposed arrangements should result in a widening of the range of service providers which should increase competition and reduce service price. However the potential for a reduction in service price should not be accompanied by a decrease in service standards as non-Registered Participants are not subject to the requirements of the Rules.

The NGF suggests that it would be prudent for AEMO to consult on the obligation and standards which are intended to form part of the tender documents to non-Registered NSCAS providers.

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

In previous submissions the NGF had raised a number of concerns from allowing TNSPs to competitively tender to AEMO to provide NSCAS. AEMO have recognised the majority of these concerns and have tried to address them in the proposed Rule.

The NGF notes that a key NGF concern relating to "unlevel playing field for tendering" has yet to be resolved. This concern is associated with the use of the RIT-T in evaluating tenders, open-ended contracting timeframes, and the lack of safeguards to prevent misuse of generator cost information available to TNSPs might tend to favour TNSPs over other parties in the competitive tendering of NSCAS.

AEMO plans to address these concerns in a yet to be established Non Market Ancillary Service (NMAS) tender guidelines. Hence the resolution of these concerns will be dependent on the outcome associated with the guidelines consultation with Stakeholders.

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

Non-registered service providers must meet the same technical requirements as existing service providers. As suggested in 4.2 the NGF believes that it would be prudent for AEMO to consult on the obligations and standards which are intended to form part of the tender documents.

Responses to 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?

NGF supports more transparency of TNSP's NSA arrangements.

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

Collectively AEMO and TNSPs have all the required information to make informed decisions about deploying NSCAS. Whether or not NSCAS are efficiently deployed depends on the information that is shared between AEMO and TNSPs and the information made available to service providers to make an informed decision on providing network services. The NGF believes the publication of the NTNDP should help all Stakeholders in this process.

Responses to Question Box 6

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

The NGF believes the AEMC should consider an alternative cost allocation methodology. On the assumption that it is appropriate for TNSPs to fund the provision of these network services in the case where they either provide or acquire under contract, then it is equally appropriate for them to fund these costs in the case where they fail to provide and AEMO fills the gap.

In the alternative case where there is no economic solution within the TNSP's own region/jurisdiction and the region needs the network service, but there is an economic solution in a neighbouring region, then it is appropriate that AEMO acquire the service where it is available, and charges the TNSP where it is needed.

This provides that not only is justice done, but also seen to be done, since a TNSP cannot under this regime avoid cost by simply failing to act.

If the TNSPs do indeed oppose this proposition, it would appear from that opposition that, prima facie, the Rule is actually necessary.

The NGF notes that under this alternative cost allocation methodology that a possible risk with this approach is that TNSPs would be even more biased towards network solutions even when a non–network solution is more efficient and cost effective. The only safeguard against this occurring is to ensure that the application and administration of the RIT-T is performed in an unbiased manner which does not favour network over non-network solutions.

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

The NGF recognises that AEMO's proposed cost recovery arrangements would be an improvement on existing arrangements.

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

The NGF strongly believes that once a TNSP makes the decision to competitively tender for NSCAS provision that the relevant network asset sits outside of the TNSPs Regulatory Asset Base (RAB) for the life of the asset.

The TNSP must not be allowed to roll this asset back into its RAB in some future period since doing so would result in TNSP possessing a free option to game between regulated and competitive revenue returns. Such an outcome would result in an un-level playing field between other service providers and TNSPs.

Responses to Question Box 7

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

The NGF agrees with the AEMC concern that there may be too much discretion for AEMO in the establishment and application of the relevant procedures and guidelines. The NGF recognises the technical nature of these arrangements leads to this situation.

The NGF suggests consideration is given to a set of principles specific to the planning and procurement of NSCAS is set in the Rules to guide AEMO's development of the relevant procedures and guidelines.

A further consideration is for a cyclical review of these guidelines imbedded in the Rules.

Responses to 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?

As stated earlier the NGF does not support the 18 month delay to address a gap in the NSCAS requirements. Hence transitional arrangements may or may not be required depending on outcome of this Rule change.

Deloitte.

National Generators Forum

Critique of AEMO's network support & control ancillary service rule change proposal

3 September 2010

Contents

Statement of responsibility

This Discussion Paper was prepared for the National Generators Forum (NGF) solely for the purposes of assisting the NGF to make a submission to the AEMC on the proposed rule that will change the framework for the management of responsibilities associated with the delivery of NSCAS in the National Electricity Market (NEM).

In preparing this Report we have relied on the accuracy and completeness of the information provided to us by NGF and from publicly available sources. We have not audited or otherwise verified the accuracy or completeness of the information. We have not contemplated the requirements or circumstances of any one other than NGF.

The information contained in this Report is general in nature and is not intended to be applied to anyone's particular circumstances. This Report may not be sufficient or appropriate for your purposes. It may not address or reflect matters in which you may be interested or which may be material to you.

Events may have occurred since we prepared this Report which may impact on it and its conclusions.

No one else, apart from NGF, is entitled to rely on this Report for any purpose. We do not accept or assume any responsibility to any one other than NGF in respect of our work or this Report.

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Executive summary

The national electricity rules (NER) required the Australian Energy Market Operator AEMO), to conduct a review of network control ancillary services (NCAS). The final determination report of AEMO's review was published in December 2009 and proposed rules in support of the final determination report were forwarded to the Australian Energy Market Commission (AEMC) in April 2010. The National Generators Forum (NGF) has engaged Deloitte to prepare a critique of the AEMO's proposed rule.

Comments in this report are premised on the assumption that the primary responsibility for the procurement and management of generic NSCS lies with TNSPs. Two matters that are considered to be outside the scope of this engagement are:

- Consideration of the structure of the regulatory investment test for transmission (RIT-T)
- Detailed review of mandated provision of reactive power through connection agreements and generator performance standards.

Our high level assessment of the merits of both existing and proposed arrangements for the procurement and delivery of network support and control services is outlined in the following table:

Principle	How effectively is the principle managed in the existing rules	How effectively is the principle managed in the proposed rules
Good regulatory practice		
• Clarity of responsibilities and accountabilities	Lack of clarity of responsibilities and accountabilities	The boundary of responsibility between TNSPs and AEMO is improved when compared to existing arrangements, but a remaining deficiency of the proposed arrangements is that there is no clear assignment of accountability and responsibility for maintaining inter-regional network capability
• Intervention should only occur in the face of a demonstrable market failure	Intervention is less a last resort in the face of a demonstrable market failure, as a signal of inconsistency in the standards applied by each of TNSPs and AEMO	Proposed arrangements are likely to substantially reduce the instances where the last resort procurement process would be invoked
• Intervention is managed with minimum discretion and maximum transparency	No clear definition of required service outcomes Even a clearly laid out process will not be able to deliver transparency of service assessment and procurement	The expectations for services outcomes are quite clear. The focus on long term outcomes is consistent with the regulatory principles outlined The process laid out is quite clear although some refinements could be made

Principle	How effectively is the principle managed in the existing rules	How effectively is the principle managed in the proposed rules
Consideration of the widest practical array of solutions		
• Consideration of both network and non-network solutions	Existing tender arrangements do not include consideration of network options	The proposed rules provide for AEMO to consider both network and non-network solutions
• Minimisation of barriers to entry	Substantial barriers to entry are apparent	Tenders for AEMO managed NSCAS can be accepted from any party, not just registered participants
Ensuring efficient service procurement and delivery		
• Clear definition of required service inputs (MVAr control or MW control)	It is difficult for AEMO to fulfil its requirement to procure an appropriate amount of residual service for the purpose of enhancing market benefit	The process provides a substantially improved level of confidence that *NSCAS need* is appropriately measured
• Services are procured and delivered in a timely manner	There is a high risk that timelines service assessment and delivery are not some way from optimal	There is a risk that all parties could agree that a service is required at a particular point in time, yet administrative process imposes inefficient delay in procurement and delivery
• Cost-effectiveness of the chosen solution in the long term	There are several reasons to believe that existing procurement practices are not delivering cost effective outcomes	Provided the assessment of *NSCAS need* is robust, the chosen solution should be cost-effective in the long term
• Establishment of clear and appropriate performance requirements for contracted services	There is no reason to believe that performance requirements for NCAS are not effectively managed	Performance requirements in relation to services delivered by third parties need to be established within the (yet to be written) NSCAS agreements
Ensuring appropriate pricing signals		
• Appropriate parties bearing the service costs	There is an inconsistency in the recovery of costs for services procured by TNSPs and services procured by AEMO	Proposed arrangements substantially improve the consistency with which NSCS costs are allocated
• Prudent remuneration practices	There is no reason to believe existing NCAS remuneration practices are imprudently managed	The proposed rules appear to apply appropriate safeguards

Deloitte has identified the following opportunities to improve proposed arrangements.

- The matter of responsibility and accountability for inter-regional network capability has not been adequately resolved. Delays in development can impose real costs on the market, but the delays could be avoided if there were appropriate and adequate accountability for maintaining inter-regional network capability.

- For the avoidance of doubt, the proposed rules should be amended to ensure consistent application of the definition of *NSCAS need* across:
  - TNSP assessment of *NSCAS need* and day-to-day application of the RIT-T
  - AEMO assessments of *NSCAS need* in the context of the NTNDP
  - AEMO assessments of *NSCAS need* in the context of the last resort procurement.
- A potential improvement in the proposed arrangements would be for TNSPs to be expressly required to respond to NTNDP identification of *NSCAS need* by identifying:
  - All existing sources of NSCAS at the relevant location
  - Existing reasons as to why the need is not current met (e.g. different analytical assumptions or methodologies compared to those used by AEMO in the NTNDP)
  - Any existing plans the TNSP has for NSCAS at that location.

  This process would provide additional comfort that any subsequent tender would proceed on the basis of full information and also an opportunity for TNSPs and AEMO to engage with a view to resolving differences in assumptions or methodology.
- TNSPs should engage at the first opportunity after it becomes apparent that there is a difference between AEMO assessment of *NSCAS need* and TNSP articulation of plans. The rule change should also consider strategies for dealing with circumstances where TNSPs may be justified, due to lack of funding, in ignoring an unmet AEMO assessment of *NSCAS need*. Unnecessary delay in delivering a market benefit should be avoided wherever possible.

Under the proposed rules, if certain conditions are met then a shortfall between TNSP service delivery plans and AEMO's NTNDP assessment of *NSCAS need* should be a reflection of legitimate inability on the part of a TNSP to procure a service due to lack of funding. If the conditions are met, a shortfall should not be an indication of either wilful or negligent failure on the part of a TNSP to assess and act on the need for a service.

Efficient outcomes in the network support and control service space – and outcomes in the long term interests of electricity as per the NEO – will rely on three things:

- Clear assignment of responsibility and accountability for both intra- and inter-regional network capability
- Providing maximum incentive for TNSPs to focus their efforts on delivery of service outcomes rather than management of assets
- Ensuring application of the RIT-T incorporates an appropriate balance of consideration of both network and non-network options.

If the market achieves these things, then the last resort procurement process will play very little, if any, role in the delivery of network support and control services.

1 Introduction

1.1 Background

The national electricity rules (NER) required the Australian Energy Market Operator (AEMO, formerly NEMMCO), to conduct a review of network control ancillary services (NCAS). The final determination report of AEMO's review was published in December 2009 and proposed rules in support of the final determination report were forwarded to the Australian Energy Market Commission (AEMC) in April 2010.

AEMC subsequently (in July 2010) published a consultation paper on AEMO's proposed rule changed and invited submissions from interested parties by 3 September 2010.

The National Generators Forum (NGF) has engaged Deloitte to prepare a critique of the AEMO's proposed rule. We understand that NGF wishes to make a submission to the AEMC on the proposed rule and may use Deloitte's critique of the proposed rule as an attachment to their (public) submission.

1.2 Terms of reference

The matters the NGF has asked Deloitte to address, and the sections in which those matters are addressed, is outlined below:

Terms of reference	Where addressed
• Provide a comprehensive critique of the AEMO Rule change proposal – with a focus on exposing key risks associated with AEMO's proposed changes.	Sections 4, 5 and 6
• In the area of procurement and planning, review the proposed rules with particular focus on:	
– whether there is a sufficiently clear articulation of Transmission Network Service Providers' (TNSPs') and AEMO's respective incentives and responsibilities for network support & control ancillary services (NSCAS) procurement	Section 5.1
– whether the proposed definition of a *NSCAS need* encourages efficient quantities of NSCAS being procured – noting that the proposed definition focuses more on longer term planning objectives in contrast to the existing arrangements that focus on the short term by enhancing the value of spot market trading through the use of NSCAS.	Sections 5.2 and 5.4.1
• Critique the analysis undertaken by AEMO to justify the proposed Rule changes, including identification of:	
– any key gaps in this analysis	Section 5
– material risks not considered by AEMO	Section 5
– other issues that could impact on the efficiency of the National Electricity Market as per the national electricity objective (NEO).	Section 7

Terms of reference	Where addressed
• On the assumption that TNSPs are allowed to tender for AEMO's NSCAS contracts through a competitive tender process, provide comment on how a competitively neutral evaluation of tenders could be performed by AEMO	Section 6

1.3 A note on interpretation

As per the AEMO proposed rule change, this report will distinguish between:

- generic network support and control services (**generic NSCS**) – services delivered by either TNSPs or AEMO
- network control ancillary services (NCAS) – currently tendered and procured by AEMO
- network support and control ancillary services (**NSCAS**) – the name for services procured under tender arrangements by AEMO as defined by the proposed rules

Comments in this report are premised on the assumption that the primary responsibility for the procurement and management of generic NSCS lies with TNSPs. This report will focus mainly on the framework around effective and efficient procurement and delivery of 'last resort' network support and control services (**last resort procurement**). By last resort, we mean services that are to be procured by AEMO in order to fill a gap that has been left by failure – for whatever reason – by TNSPs to procure all the service necessary to:

- ensure system-wide security and reliability
- take advantage of an opportunity to increase network transfer capability for the benefit of the market.

Necessarily, this report will also comment on the framework in place (or proposed) for TNSPs to deliver similar services and the reasons why last resort procurement becomes necessary.

There are two aspects of the environment in which generic NSCS are delivered on which Deloitte will not comment in detail:

- The incentive applied to TNSPs to make a cost-effective choice between network and non-network options for delivery of generic NSCS is a matter that can only be addressed through consideration of the structure of the regulatory investment test for transmission (RIT-T)[1]. This matter is outside the scope of this engagement.
- A substantial component of generic NSCS is supplied to TNSPs through 'mandated' provision of reactive power capability as a legacy of connection agreements and generator performance standards. Given the absence of any price signal for this service, the outcome is not likely to reflect an efficient allocation of resources. Although, ideally, all reactive power capability would be sourced through some sort of contracting and market arrangements, changes to NEM structures go to the heart of market design and are outside the scope of this report. Deloitte notes that AEMO acknowledged that this matter should be considered as part of the Reliability Panel's future review of the Technical Standard settings.

1.4 Structure of this report

This report is structures as follows:

- Section 2 lays out some principles that could reasonably applied to the procurement and delivery of NSCAS in the NEM

[1] The principles of which should apply to both TNSPs and AEMO.

- Section 3 provides a brief assessment of the existing NCAS arrangements against the principles outlined in Section 2
- Section 4 provides a brief assessment of the proposed rules for management of NSCAS against the principles outlined in Section 2
- Section 5 provides a detailed discussion on the clarity of the definition of *NSCAS need*, the assignment of responsibilities and the efficiency of the outcomes that are likely to arise as a result
- Section 6 discusses competitive neutrality in the evaluation of tenders
- Section 7 provides some concluding remarks highlight the gaps risks and issues identified in our analysis and provides a brief commentary on how the proposed rules are likely to contribute to the achievement of the national electricity objective.

2 Principles for efficient NSCAS procurement and delivery

As recently expressed by the AEMC:

> *The Rule making test states that 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. The objective of the [National Electricity 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.*
>
> *The NEO is founded on the concepts of:*
>
> - *economic efficiency (including productive, allocative and dynamic dimensions of efficiency);*
> - *good regulatory practice (which refers to the means by which regulatory arrangements are designed and operated); and*
> - *reliability, safety and security priorities.*[2]

Although the NEO provides an overarching framework for the assessment, for complex matters it would not be unreasonable to identify additional principles that could serve as further guidance for the application of the NEO. The following represents a set of principles that will provide a framework for the assessment of whether existing and proposed arrangements are likely to lead to efficient procurement and delivery of NSCAS.

2.1 Good regulatory practice

The elements of good regulatory practice with respect to the delivery of generic NSCS are as follows:

- Clarity of responsibilities and accountabilities for outcomes with respect to:
  - security
  - reliability
  - safety
  - market benefits.
- Intervention only occurring in the face of a demonstrable market failure – i.e. the market having a chance to work initially, recognising that the judgement of the correct point at which to intervene could be contentious
- Intervention, when it occurs, being managed with minimum discretion and maximum transparency. The following elements may be required to manage the intervention:
  - The term and scope of the intervention is limited, but still consistent with long term efficient outcomes

[2] AEMC 2009, *Improved RERT Flexibility and Short-notice Reserve Contracts*, Rule Determination, 15 October 2009, Sydney, p13.

  - There is clear definition of required service outcomes
  - There is clear definition of process
  - There is transparency of assessment and procurement.

2.2 Consideration of the widest practical array of solutions

The process of identifying a solution should not unreasonably restrict the options from which to choose – in the context of delivery of generic NSCS by TNSPs or NCAS/NSCAS by AEMO:

- Consideration of both network and non-network solutions
- Minimisation of barriers to entry – subject to adequate management of power system security, reliability and safety, allowing both participants and non-participants to be considered as partners in the solution set.

These are elements of productive efficiency.

2.3 Ensuring efficient service procurement and delivery

The elements of ensuring efficient service procurement and delivery comprise the following:

- Clear definition of required service inputs – the "correct" amount of service (MVAr control or MW control) should be procured, neither too much nor too little. Guidance in respect of this would be provided by technical standards and appropriate application of the RIT-T
- Services are procured and delivered in a timely manner
- Cost-effectiveness of the chosen solution in the long term
- Establishment of clear and appropriate performance requirements for contracted services. Questions relevant to assessing the of appropriateness performance requirements include the following:
  - Are there appropriate incentives in place to ensure that once a service is procured, it is available and performs effectively at the times required and expected?
  - What are the performance incentives that accompany a contract for service?

These are elements of productive and dynamic efficiency.

2.4 Ensuring appropriate pricing signals

The following elements ensure that there are appropriate pricing signals in place:

- Appropriate parties bearing the service costs
- Prudent remuneration practices – contractual terms being sufficiently robust to avoid opportunities for service providers to engage in "double dipping" or other forms of gaming.

These are elements of allocative and dynamic efficiency.

3 Efficiency principles & existing arrangements

The following summarises the performance of existing arrangements for the management of generic NSCS by TNSPs and NCAS by AEMC against the principles outlined in Section 2.

Principle	How effectively is the principle managed in the existing rules
Good regulatory practice	
• Clarity of responsibilities and accountabilities for outcomes with respect to: – security – reliability – safety – market benefits	• There is a lack of clarity of responsibilities and accountabilities. – The boundaries of responsibility between TNSPs and AEMO for the delivery of generic NSCS are not well defined. TNSPs and AEMO each have their own forms of responsibility for system security and reliability, but there is no commonly understood set of standards used to assess the adequacy of existing network support and control services. – There is nothing in either the NEL or the NER that clearly assigns any party with responsibility or accountability for maintenance of inter-regional network capability. AEMO has, at times, filled the gap as a consequence of some legacy contracts inherited at market start. – For services that are not required for either security or reliability reasons, AEMO's obligations with respect to affecting market benefits are mentioned only in the (heavily qualified) Rule clause 3.11.4(b)(2) – whereby AEMO is required: ***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 non-market ancillary service costs will not exceed the resultant* ***expected*** *increase in benefits of trade from the spot market. [Emphasis added.]* A focus primarily on short term goals is likely to result in some inefficiency in the long term where, for example, long term availability costs are ignored. Only if long term costs are not a substantial consideration will a short term focus be consistent with long term efficient outcomes.

Principle	How effectively is the principle managed in the existing rules
• Intervention should only occur in the face of a demonstrable market failure	• Intervention through procurement of NCAS by AEMO is not so much a last resort in the face of a demonstrable market failure, as it is a consequence of assessing a **residual service requirement**, where the residual is the difference between: – The amount of reactive power capability (as declared by TNSPs to AEMO) available for deployment to meet TNSPs' interpretation of their system security and reliability obligations[3] and – The (higher) amount of reactive power capability AEMO assesses as being necessary to meet its interpretation of its system security and reliability obligations.
• Intervention is managed with minimum discretion and maximum transparency: – The term and scope of the intervention is limited – Clear definition of required service outcomes – Clear definition of process – Transparency of assessment and procurement	• As a result of the lack of clarity in the respective responsibilities between TNSPs and AEMO there is no clear definition of required service outcomes and AEMO must therefore exercise considerable discretion when determining the amount of service it should procure. • Given the uncertainty around definition of required service outcomes, even a clearly laid out process will not be able to deliver transparency of service assessment and procurement. • Tender timeframes of two to three years are consistent with a requirement to limit the term and scope of the intervention, however, given the nature of the tendering process that only seeks to contract for services over two to three years, the timeframe takes no account as to whether the tender term is consistent with efficient outcomes in the long term.
Consideration of the widest practical array of solutions	
• Consideration of both network and non-network solutions	There is a distinct difference with respect to the options available to TNSPs for generic NSCS and those available to AEMO for NCAS: TNSPs are expressly encouraged to seek both network and non-network solutions; whereas for AEMO managed NCAS, only non-network solutions are contemplated.

[3] This is the amount of reactive power capability TNSPs have available through a) their own assets; b) connection agreements with generators or other connecting parties; and c) third-party contracts. Although there is no reason to believe that TNSPs fail to declare all their reactive power capability to AEMO, there is currently no clear obligation for TNSPs to do so.

Principle	How effectively is the principle managed in the existing rules
• Minimisation of barriers to entry	• There are distinct differences with respect to the service provider options available to TNSPs for generic NSCS and those available to AEMO for NCAS: – Subject to an ability to meet the requirements consistent with TNSPs' obligations with respect to power system security, reliability and safety, no party is prevented from providing services or managed assets to TNSPs – The NCAS tender process currently conducted by AEMO seeks delivery of service only from registered market participants – parties who are not registered market participants (such as demand side management operations) do not qualify for tender participation. Although TNSPs are registered participants and technically qualify for participating in the tender, they are effectively excluded under the existing tender form by virtue of the fact that AEMO partially relies on TNSPs to define the amount of service that needs to be procured. Therefore, any subsequent participation by TNSPs in a tender process would represent a conflict of interest.
Ensuring efficient service procurement and delivery	
• Clear definition of required service inputs (MVAr control or MW control)	• Separate consideration must be given to services required for each of the purposes of security, reliability and market benefit: – There are standards for the maintenance power system security and reliability and there is no reason to believe that the total amount of service procured by both TNSPs and AEMO is inappropriate, notwithstanding the lack of clarity in individual obligations of AEMO and TNSPs – As reflected in the heavily qualified clause 3.11.4(b)(2) of the NER and the associated tendering framework, it is difficult for AEMO to fulfil its requirement to procure an appropriate amount of residual service for the purpose of enhancing market benefit.
• Services are procured and delivered in a timely manner	• Given the lack of clarity in the responsibilities of the respective parties, there is a high risk that timelines for service assessment and delivery are some way from optimal.
• Cost-effectiveness of the chosen solution in the long term	• There are several reasons to believe that existing procurement practices are not delivering cost effective outcomes for delivery of generic NSCS: – Even if a non-network solution is cost-effective, TNSPs arguably have an incentive to focus on network augmentation solutions for their share of generic NSCS as a network solution would deliver an asset: a) on which they would earn a regulated return; and b) over which they have direct control thus reducing doubts over service availability and reliability – Even if a network solution is cost-effective, given the restricted nature of the current NCAS tender process, only registered market participants can provide service and network solutions are not considered.

Principle	How effectively is the principle managed in the existing rules
• Establishment of clear and appropriate performance requirements for contracted services	There is greater complexity in the service performance requirements for generic NSCS managed by TNSPs than for service performance requirements for NCAS managed by AEMO: • The sheer volume of services and the range of assets managed by TNSPs makes assessment of an individual service performance quite challenging. The service target performance incentive scheme (STPIS) goes some way to changing the TNSP focus from assets and towards outcomes, but the STPIS is an imperfect tool that that needs further work • There is no reason to believe that performance requirements for NCAS are not effectively managed.
Ensuring appropriate pricing signals	
• Appropriate parties bearing the service costs	• Although the effects of reactive power delivery through TNSP sources and AEMO's NCAS can be identical, the cost of reactive power managed by TNSPs is funded through revenue earned on its regulated assets via TUoS charges on customers residing within the TNSPs own jurisdiction whereas the cost of reactive power delivered by AEMO's NCAS is funded through participant fees on market customers spread across the entire NEM on the basis of energy.
• Prudent remuneration practices	• There is no reason to believe existing NCAS remuneration practices are imprudently managed or encourage any form of gaming of revenue opportunities by service providers.

4 Efficiency principles & proposed arrangements

The following summarises the performance of existing arrangements for the management of generic NSCS by TNSPs and NCAS by AEMC against the principles outlined in Section 2.

Principle	How effectively is the principle managed in the proposed rules
Good regulatory practice	
• Clarity of responsibilities and accountabilities for outcomes with respect to: – security – reliability – safety – market benefits	The boundary of responsibility between TNSPs and AEMO is improved when compared to existing arrangements. As a default, TNSPs are assumed to be responsible for the procurement of all generic NSCS. AEMO, as part of its NTP function, would assess the requirement for NSCAS annually (determined in accordance with the NSCAS quantity procedure) and to include that assessment in its national transmission network development plan (NTNDP) as an identified *NSCAS need*. AEMO would seek to identify *NSCAS need* for a planning horizon of at least five years. AEMO only commences a last resort procurement process for NSCAS if the identified *NSCAS need* remains unmet for a defined period of time. A remaining deficiency of the proposed arrangements is that there is no clear assignment of accountability and responsibility for maintaining inter-regional network capability.

Principle	How effectively is the principle managed in the proposed rules
• Intervention should only occur in the face of a demonstrable market failure	The nature of the market failure that will trigger intervention through initiation of a last resort procurement process (AEMO conducted NSCAS tender) is clearly and (in Deloitte's view) reasonably defined, with ample opportunity provided for TNSPs to correct the market failure before intervention proceeds.[4] In summary the process is: • An identified *NSCAS need* must remain unmet for a period of 18 months following which AEMO will request the TNSP to advise when arrangements to meet the need will be in place • TNSPs are required to respond to AEMO within 30 days • If, after considering the TNSP response, AEMO believes the *NSCAS need* will remain unmet, AEMO can initiate a last resort procurement process. The nature of these provisions is likely to substantially reduce the instances where the last resort procurement process would be invoked.
• Intervention is managed with minimum discretion and maximum transparency: – The term and scope of the intervention is limited – Clear definition of required service outcomes – Clear definition of process – Transparency of assessment and procurement	• Given the iterative process involving TNSPs' annual planning reviews (APRs) and AEMO's NTNDPs in identifying the *NSCAS need*, at the point where last resort procurement is initiated, the expectations for services outcomes are quite clear. The focus on long term outcomes is consistent with the regulatory principles outlined. • The process to be followed in tendering for and assessment of offers to provide NSCAS is reasonably clearly laid out in the proposed rules, although some refinements (discussed in Section 5) could be made.
Consideration of the widest practical array of solutions	
• Consideration of both network and non-network solutions	The incentive applied to TNSPs to make a cost-effective choice between network and non-network options for delivery of generic NSCS is a matter that can only be addressed through consideration of the structure of the RIT-T. In the last resort procurement process, the proposed rules provide for AEMO to consider both network and non-network solutions.

[4] See clause 3.11.3 of the proposed rule.

Principle	How effectively is the principle managed in the proposed rules
• Minimisation of barriers to entry	Specific measures have been taken in the proposed rules to eliminate limitations in the range of acceptable tenderers to any last resort procurement process. • Tenders for AEMO managed NSCAS can be accepted from any party, not just registered participants – this would allow non-participant managed sources of reactive power or network loading control to offer their services.[5] • Given: – the proposed role of the NTNDP in identifying both *NSCAS need* sufficient to manage minimum flow path capabilities, and above-minimum capabilities with the potential to deliver additional net market benefit – TNSP obligations to declare works and capability planning in their APRs – review measures to identify instances where TNSPs have not followed-up on identified *NSCAS need* the conflict of interest that prevented NSPs from participating in existing NCAS tenders has been largely eliminated. Subject to certain safeguards being implemented,[6] NSPs could participate in a last resort procurement without having a conflict of interest.
Ensuring efficient service procurement and delivery	
• Clear definition of required service inputs (MVAr control or MW control)	The comprehensiveness of the NTNDP process, based on the achievement and maintenance of national flow-path capabilities, provides a substantially improved level of confidence that *NSCAS need* is appropriately measured.
• Services are procured and delivered in a timely manner	Under the proposed arrangements there is a risk that all parties could agree that a service is required at a particular point in time, yet the 18 month administrative process (TNSP responses to NTNDPs) imposes inefficient delay in procurement and delivery.
• Cost-effectiveness of the chosen solution in the long term	Provided the assessment of *NSCAS need* is robust, and the tender expresses clear timeframes for provision of service consistent with long term efficient outcomes, the chosen solution should be cost-effective in the long term.
• Establishment of clear and appropriate performance requirements for contracted services	Performance requirements in relation to services delivered by third parties need to be established within the (yet to be written) NSCAS agreements.

[5] As non-participants would not be bound by the National Electricity Rules service quality and reliability would be managed through contracts.
[6] See discussion in Section 5.1.

Principle	How effectively is the principle managed in the proposed rules
Ensuring appropriate pricing signals	
• Appropriate parties bearing the service costs	Consistent with the principles of allocative efficiency, efficient outcomes are more likely to be observed if the parties who seek a service to be provided, have an opportunity to express a value for that service and, knowing that value, they are prepared to pay commensurate costs. Imposing costs as closely as possible to identifiable beneficiaries is likely to produce a more efficient outcome than if no effort is made to identify and charge beneficiaries. The proposed rules appropriately reflect these principles: • TNSPs recover generic NSCS costs from TUoS charges, which are effectively (if not directly) imposed on customers within the relevant TNSP's own jurisdiction who generally benefit from investment in the service by their local TNSP • Last resort procurement of NSCAS by AEMO would be recovered from market customers located in the beneficiary region.
• Prudent remuneration practices	It should be up to prospective service providers to determine (or negotiate with AEMO) what the most appropriate structure of payment for service should be – whether that structure reflects any or all of availability, enablement and deployment components. A service provider's remuneration for a service should be commensurate with a reasonable return on investment in service capability. AEMO will be required to choose the best value and most effective service from among all viable offers. Given each tendered service is likely to have a different payment structure, AEMO will have to select the services that represents the best combination of effectiveness and value – trade-offs will need to be made. In determining remuneration arrangements, the process should ensure service providers do not engage in double-dipping – that is, being paid twice to deliver a single service. With respect to last resort procurement of NSCAS by AEMO from TNSPs, the proposed rules appear to apply appropriate safeguards by liaising with the Australian Energy Regulator (AER) to seek to ensure there is no overlap with regulated assets.

5 NSCAS need: efficiency and clarity

This section addresses the following element of the terms of reference for this report:

> *In the area of procurement and planning, review the proposed rules with particular focus on:*
>
> - *whether there is a sufficiently clear articulation of TNSP's and AEMO's respective incentives and responsibilities for NSCAS procurement*
> - *whether the proposed definition of a "NSCAS need" encourages efficient quantities of NSCAS being procured – noting that the proposed definition focuses more on longer term planning objectives in contrast to the existing arrangements that focus on the short term by enhancing the value of spot market trading through the use of NSCAS.*

5.1 Clarity of responsibilities

5.1.1 General and intra-regional issues

We understand that the NGF is concerned that the proposed definition of NCAS need changes the focus of AEMO's obligation from a specific reference to increase in (short term) benefits of trade from the spot market, to a generic reference to the present value of net economic benefit to all those who produce, consume or transport electricity in the *market.*

However, Deloitte considers proposed changes in this area represent a step forward and provide a framework for more effective application of incentives and definition of respective responsibilities.

The current NER defines[7] the process for determining the amount of NCAS that AEMO should procure as follows:

> *AEMO* must develop and *publish* a procedure for determining the quantities of each kind of *network control ancillary service* required for *AEMO*:
>
> (1) to achieve the *power system 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 *network control ancillary service* costs will not exceed the resultant **expected** increase in benefits of trade from the *spot market*. [Emphasis added.]

The heavy qualifications to sub clause (2) makes it difficult to give practical effect to the clause or to make AEMO accountable for achievement of the implied obligation. Practical assessment of whether AEMO has met the requirements of the clause is not possible.

In preparation for a two or three year NCAS contract to be managed by AEMO, in order to determine the amount of service to procure to satisfy existing clause 3.11.4(b)(2), AEMO would need to:

- Identify all practical services that could assist in achieving the desired outcome – for example:
  - reactive power control from a generator
  - network loading control (load shedding or fast start generation)

[7] Clause 3.11.4(b)

- Determine the contracting and deployment costs of each (e.g. availability payments, enablement payments and dispatch payments)
- Undertake a probabilistic assessment of which transmission flow paths would otherwise be binding – when? for how long? to what extent?
- Compare viable options and choose that (suite of) probability weighted options that would achieve the increase in benefits of trade from the spot market.

As the NGF rightly observes, provision of appropriate services may require contracts to be structured such that there is an availability component to the payment over the (two or three year) contract term and separate enablement/deployment payments for the relevant service. However, in trying to get the service deployment decision correct in the short term – in response to an emerging spot market opportunity – assessment of service value would have to abstract from any availability cost component. That is, a short term enablement/deployment decision might be 'correct' given the service was available, but if the service is not deployed sufficiently often, the long term balance of availability payments, enablement/deployment payments and spot market trading benefits might prove uneconomic in the long term.

With respect to the goal of increasing the benefits of trade from the spot market, unless availability payments for a service are (close to) zero, it is not practical for NSCAS procurement decisions to be based on potential short term outcomes.

The alternative approach taken by AEMO in the proposed rule is to ensure that NSCAS obligations and assessment of *NSCAS need* apply to both TNSPs and AEMO, but that AEMO's role is limited to a last resort action where intervention is only taken where there is a demonstrable market failure. Further, when various parties are assessing the amount of service that should be procured, the same guidelines (with a long term focus) for assessment apply in each case.

The new definition of NCAS need is provided in clause 3.11.4(b) of the proposed rules, which state:

> *AEMO* must develop and *publish* a procedure (***NSCAS quantity procedure***) for determining the location and quantities of each type of *network support and control ancillary service* required (*NSCAS need*):
>
> (1) to maintain *power system security* and reliability of *supply* of the *transmission network* in accordance with the *power system security and reliability standards*; and
>
> (2) 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.*

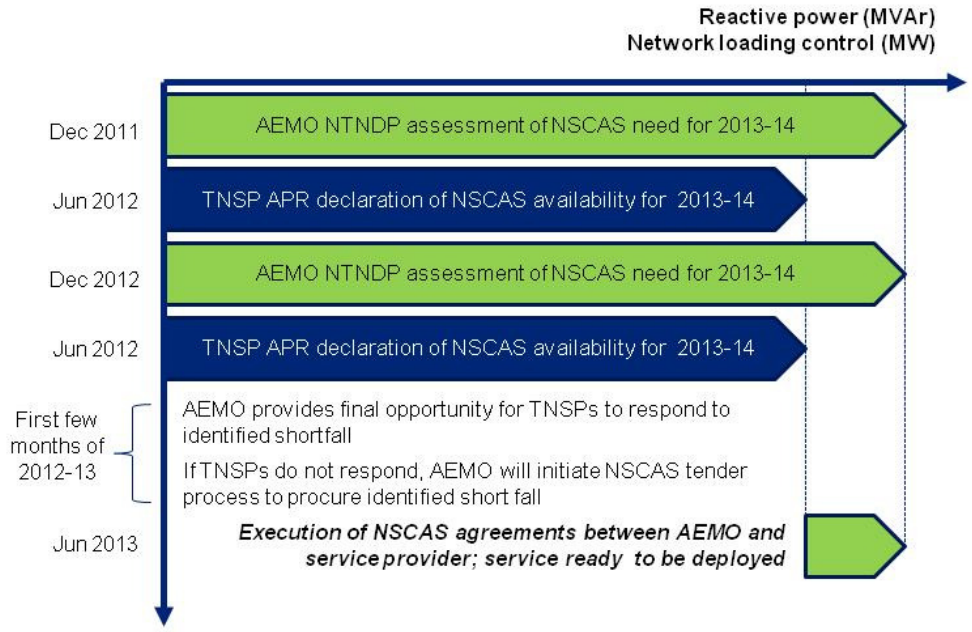
The reference to "the present value of net economic benefit to all those who produce, consume or transport electricity in the market" is consistent with the language of the stated purpose for the RIT-T in clause 5.6.5B(b) of the NER – a test that considers the balance of costs and benefits over the lifetime of the asset or the contract for a service. Applying the same criteria to AEMO's assessment of last resort procurement should not bias procurement decisions towards any particular form of technology.[8] For example:

- If an *NSCAS need* is transient (lasting only, say, 3 years), the optimal solution could be contracting for the provision of reactive capability from a strategically located generator
- If the *NSCAS need* is long term (say, 10 to 20 years), the optimal solution may be some form of network infrastructure such as a capacitor banks.

In either case, the proposed rules and the process depicted in Figure 1 have the ability to facilitate an optimal outcome provided there is sufficient notice given before failure to act on the opportunity imposes inefficiency costs on the market. (See discussion in Section 5.4.1.)

[8] In its final rule determination, AEMO has indicated that it would work with the AER in developing the guidelines for the efficient deployment of NSCAS to deliver the net market benefits under the RIT-T objective.

Figure 1: Example of NSCAS need assessment and procurement process

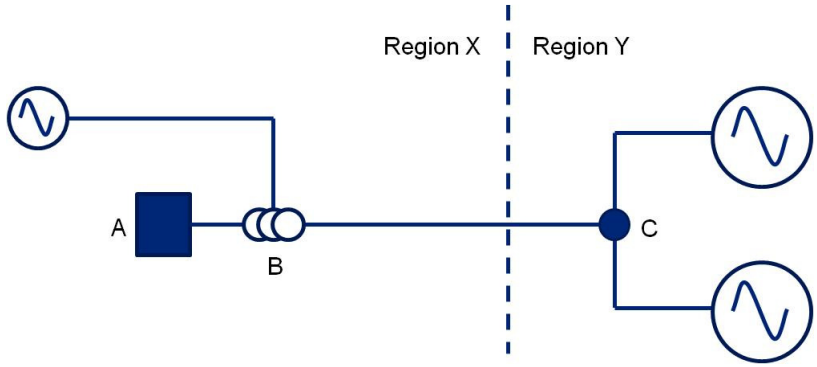


5.1.2 Inter-regional issues

One of the unstated objectives of the 18 month process outlined in Figure 1 seems to be that it may encourage TNSPs to voluntarily respond to opportunities to enhance inter-regional network capability. However, the existing and proposed rules do not assign any party with responsibility or accountability for maintaining (or developing) inter-regional network capability.

Situations can arise where the there is an opportunity to market outcomes with some form of network development or service, yet the party responsible for procuring relevant capability is unclear. NEMMCO's issues and options paper for the NSCS review[9] outlined the following example:

> *A network planner identifies the possibility that in 2 years time, in the absence of network augmentation or delivery of additional network control services a particular load centre at Location A faces the risk of being unsupplied because of likely development of unfavourable generation and load patterns.*



> *Network infrastructure is sufficiently robust, but the circumstances of the day restrict the secure transfer capability of critical network elements. Options to relieve the load shedding risk at Location A are as follows:*

[9] NEMMCO, *Review of Network Support & Control Services, Issues & Options Discussion Paper*, July 2008. Available at: http://www.aemo.com.au/electricityops/168-0099.pdf

1. *Upgrade transformer at Location B to increase the secure network transfer capability between B and A. B is just 20km from A. Both A and B are within the same market region and the same jurisdiction (host TNSP X).*
2. *Inject reactive power at Location C to increase secure network transfer capability between C and A. C is 500km from Location A. A and C are in different market regions and different TNSP jurisdictions. C is within the jurisdiction of host TNSP Y.*

Neither the existing nor the proposed rules provide any clear guidance as to how to resolve this problem. Instead, the proposed Rules rely on either:

- The 18 month delay between first identification of an NSCAS opportunity and intervention via a tender process initiated by AEMO
- The last report planning process initiated by the AEMC.

The matter of responsibility and accountability for inter-regional network capability has not been adequately resolved.[10] Delays in development can impose real costs on the market, but the delays could be avoided if there were appropriate and adequate accountability for maintaining inter-regional network capability.

5.2 Efficiency of NSCAS procurement

As noted in Section 1.3, given the absence of any price signal for 'mandated' provision of reactive power capability as a legacy of connection agreements and generator performance standards, the outcome for the provision of generic NSCS is not likely to reflect an efficient allocation of resources. If TNSPs were to procure all its services through transparent and accountable market processes, rather than through mandated processes, efficient outcomes are more likely to be achieved. Deloitte notes that AEMO acknowledged that this matter should be considered as part of the Reliability Panel's future review of the Technical Standard settings – no further comment is offered with respect to the efficiency of mandated provision of reactive power capability.

One potential deficiency in the proposed arrangements is that, although implied, there is no indication that the initial NTNDP assessment of *NSCAS need* would necessarily use the definition in proposed clause 3.11.4(b). If:

- TNSPs are expected to use the definition of *NSCAS need* in proposed clause 3.11.4(b) in making their assessment of generic NSCS
- AEMO is expected to use the definition of *NSCAS need* in proposed clause 3.11.4(b) in making their assessment of NSCAS when intervention is determined to be necessary

then

- AEMO should also be required to use the definition of *NSCAS need* in proposed clause 3.11.4(b) when making assessments in the NTNDP for long term planning requirements.

For the avoidance of doubt, the proposed rules should be amended to ensure consistent application of the definition of *NSCAS need* across:

- **TNSP assessment of *NSCAS need* and day-to-day application of the RIT-T**
- **AEMO assessments of *NSCAS need* in the context of the NTNDP**
- **AEMO assessments of *NSCAS need* in the context of the last resort procurement.**

[10] Deloitte observes that, conceptually, this responsibility could be assigned to either TNSP or to AEMO. If the responsibility were to be assigned to TNSPs, the question remains as to whether the responsibility is joint or perhaps only with importing region TNSPs. If the responsibility were assigned to AEMO, difficulties may arise as to where to draw an appropriate boundary between inter-regional and intra-regional network responsibility.

5.3 Conflicts of interest

Existing arrangements for the tendering of NCAS by AEMO effectively exclude TNSPs on the basis of a conflict of interest – for example:

- AEMO makes an assessment of the overall requirement for NCAS in the form of reactive power at a particular location – *x* MVAr
- AEMO relies on TNSP advice as to the amount of reactive power available at that location – *y* MVAr
- AEMO issues an invitation to tender for tender for the provision of (*x*-*y*) MVAr.

The reason this represents a conflict is that:

- TNSPs are under no formal rules obligation to declare to AEMO all the reactive power they have available
- If TNSPs were eligible to tender for NCAS, they would have an incentive to under-report the amount of reactive capability that is available, so as to maximise the amount of reactive power subject to tender thereby increasing their chances of participation.

A further concern expressed by the NGF is that TNSPs' involvement in AEMO's NSCAS tender process might create a moral hazard whereby TNSPs avoid making efficient regulated investments in order to pursue potentially more attractive, unregulated returns from AEMO.

AEMO has sought to resolve the conflict of interest problem by:

- Ensuring consistency between TNSP and AEMO activities in the *NSCAS need* assessment process
- Increasing the transparency of assessment of *NSCAS need* through TNSP APRs and the AEMO NTNDP
- Not taking action to invoke NSCAS tender provisions until a need identified in two consecutive NTNDPs remains unmet and the responsible TNSP has not identified, in its next APR, plans for meeting the requirement.

The objective of this process is to ensure TNSPs do not have any undeclared reactive power capability. While this arrangement seems likely to be effective, **a potential improvement in the proposed arrangements would have TNSPs expressly required to respond to NTNDP identification of *NSCAS need* by identifying:**

- **All existing sources of NSCAS at the relevant location**
- **Existing reasons as to why the need is not currently met (e.g. different analytical assumptions or methodologies compared to those used by AEMO in the NTNDP)**
- **What existing plans the TNSP has for NSCAS at that location.**

This process would provide additional comfort that any subsequent tender would proceed on the basis of full information and also an opportunity for TNSPs and AEMO to engage with a view to resolving differences in assumptions or methodology.

5.4 Appropriateness of incentives

5.4.1 Incentive for efficient management of process

The regulatory and last resort procurement processes should support an environment whereby the following conditions are met:

- Responsibility and accountability for NSCAS procurement is clear

- The RIT-T does not favour either network or non-network solutions
- Both TNSPs and AEMO use consistent methodologies for assessment of *NSCAS need*.

However, even if this is the case, the nature of the current process for regulating TNSP investment in network capability can still give rise to circumstances where TNSPs may agree with AEMO that an NCAS need exists, but a TNSP could legitimately refuse to meet that need in the absence of additional funding, Consider the following circumstances:

- TNSP A is subject to a regulatory period that runs from July 2012 to June 2017.
- Prior to July 2012, TNSP A and the regulator agree on a level of funding for a capital works program and procurement of NSCAS where each project is justified through application of the RIT-T - all identified projects and services are considered necessary to meet the optimal flow path capabilities identified in AEMO's 2010 NTNDP.
- Time passes.
- As a result of previously unanticipated market developments (changes in generation and load patterns), AEMO's December 2013 NTNDP identifies a near term need to increase a flow path capability at location X within the jurisdiction of TNSP A – a net market benefit would be realised if additional NSCAS were available at that location from July 2014.
- TNSP A agrees with the assumptions and assessment methodology applied by AEMO in assessing the *NSCAS need*, TNSP A has diligently followed its planned capital works program agreed for the period that runs from July 2012 to June 2017 and all works in that program remain a high priority. Given the revenue cap, upgrade of flow path capability at location X can only be funded by diverting funding from other (necessary) capital works.

In the situation described, it is both rational and justifiable (given existing incentives) for the TNSP to refuse to procure the additional NSCAS for location X. In the absence of some source of extra funding, the *NSCAS need* at location X could remain unmet from July 2014 until after July 2017 when the new regulatory period for TNSP A commences and funding for a new program of capital works and service procurement is approved.

Under the proposed rule changes, even if all processes work correctly there would be a delay until at least July 2015 before AEMO would give consideration to invoking the NSCAS tender process, with little prospect of new services and additional flow path capability being available until July 2016[11] – two years after the services would have started delivering a net market benefit.

The apparent rationale for an 18 month delay – providing two opportunities for the TNSP to respond via its APR to AEMO's identified *NSCAS need*, thereby encouraging TNSPs to adjust their plans or reveal additional service capability – could be misconceived. In the circumstances described above, delay could achieve nothing other than delayed realisation of market benefit. Alternatively, a difference between AEMO assessment of *NSCAS need* and TNSP articulation of plans could be no more than a reflection of a difference between TNSP and AEMO assumptions and/or assessment methodology.

At the very least, TNSPs should engage with AEMO at the first opportunity after it becomes apparent that there is a difference between AEMO assessment of *NSCAS need* and TNSP articulation of its plans. The rule change should also consider strategies for dealing with circumstances where TNSPs may be justified, due to lack of funding, in ignoring an unmet AEMO assessment of *NSCAS need*. Unnecessary delay in delivering a market benefit should be avoided wherever possible.

Under the proposed rules, if the conditions outlined at the beginning of this section are met then a shortfall between TNSP service delivery plans and AEMO's NTNDP assessment of *NSCAS need* should be a reflection of legitimate inability on the part of a TNSP to procure a service due to lack of

[11] Assuming the NSCAS contracts would be let on a financial year basis.

funding. If the conditions are met, a shortfall should not be an indication of either wilful or negligent failure on the part of a TNSP to assess and act on the need for a service.

5.4.2 Operational efficiency

Efficient management of process and efficient procurement of service does not guarantee efficient service delivery outcomes. Following procurement, there must be strong incentives placed on both service managers and service providers to ensure that best value is extracted from the facilities whose cost is ultimately borne by consumers. The STPIS goes some way to strengthening the incentive for TNSPs to effectively use the assets and services for which they have been funded, but the STPIS is a limited tool.

Given the gradual alignment of the evaluation processes for TNSP investments, NTNDP proposals and AEMO interventions to the principles in the RIT-T it would be appropriate to consider using NTNDP flow path capabilities as a benchmark against which TNSP network management could be measured. Further alignment of TNSP and NTNDP evaluation processes, and refinement of the application flow path capabilities, could facilitate the development of viable TNSP incentive regimes where the funding emphasis moves from the basis of asset installation and towards service outcomes and optimal use of assets.

6 Competitively neutral evaluation of tenders

This section addresses the following element of the terms of reference for the report:

> *On the assumption that TNSPs are allowed to tender for AEMO's NSCAS contracts through a competitive tender process, provide comment on how a competitively neutral evaluation of tenders could be performed by AEMO.*

6.1 What does competitive neutrality mean?

The Australian Government Department of Finance and Deregulation notes that:

> *The objectives of the Australian Government's policy of competitive neutrality are:*
>
> - *that significant Australian Government business activities do not enjoy net competitive advantages over their private sector competitors (or potential competitors) simply by virtue of their public sector ownership;*
> - *to eliminate potential resource allocation distortions arising from the public ownership of significant business activities operating in contestable environments; and*
> - *to encourage fair and effective competition in the supply of goods and services.*

In this report, Deloitte has adopted a broader interpretation of competitive neutrality that seeks assurance that all parties involved in the competitive provision of services are treated in an even-handed manner, with no party enjoying any competitive advantage as a result of its ownership structure or market participation status.

6.2 How effective is the rule proposal?

NGF submissions to AEMO's consultation on the revised draft determination highlighted several areas of concern with respect to the competitive neutrality of the last resort procurement process:

- **Service double-dipping by TNSPs** – concern that there should be adequate measures in place to ensure that a TNSP cannot receive a regulated return on an asset in its regulated asset base for which it is already receiving an unregulated return from AEMO under an NSCAS contract to provide equivalent service
- **Automatic roll-over into the regulated asset base** – concern that AEMO's proposal to allow a TNSP to automatically roll an asset into its regulated asset base at the end of an NSCAS contract with AEMO could distort AEMO's competitive tender process and would not be competitively neutral
- **Unlevel playing fields for tendering** – concern that the use of the RIT-T in evaluating tenders, open-ended contracting timeframes, and the lack of safeguards to prevent misuse of generator cost information available to NSPs might tend to favour NSPs over other parties in the tendering of NSCAS to AEMO.

In each case, AEMO has responded to NGF's concerns in a reasonable and practical manner with proposed rules that reflect sound arrangements for the management of the last resort procurement process. The following outlines AEMO's response on the above areas:

- **service double-dipping by TNSPs** – by publishing sufficient details of successful NSCAS tenders to allow AER to identify relevant TNSP assets and excising services provided to AEMO from the definition of prescribed assets
- **automatic roll-over into the regulated asset base** – AEMO resolved to not pursue this option as it acknowledged that allowing asset roll-over for TNSPs would represent unequal treatment of tenderers
- **unlevel playing fields for tendering** – AEMO accepted that having open-ended tenders did create some uncertainty and potential bias towards fixed assets and away from limited time-frame third-party services.

7 Concluding remarks

This section provides some concluding remarks that highlight the gaps, risks and issues identified in the foregoing analysis, and provides a brief commentary on how the proposed rules are likely to contribute to the achievement of the national electricity objective.

7.1 Opportunities to improve proposed arrangements

Deloitte has identified the following opportunities to improve proposed arrangements.

- The matter of responsibility and accountability for inter-regional network capability has not been adequately resolved. Delays in development can impose real costs on the market, but the delays could be avoided if there were appropriate and adequate accountability for maintaining inter-regional network capability.
- For the avoidance of doubt, the proposed rules should be amended to ensure consistent application of the definition of *NSCAS need* across:
  - TNSP assessment of *NSCAS need* and day-to-day application of the RIT-T
  - AEMO assessments of *NSCAS need* in the context of the NTNDP
  - AEMO assessments of *NSCAS need* in the context of the last resort procurement.
- A potential improvement in the proposed arrangements would be for TNSPs to be expressly required to respond to NTNDP identification of *NSCAS need* by identifying:
  - All existing sources of NSCAS at the relevant location
  - Existing reasons as to why the need is not current met (e.g. different analytical assumptions or methodologies compared to those used by AEMO in the NTNDP)
  - Any existing plans the TNSP has for NSCAS at that location.

  This process would provide additional comfort that any subsequent tender would proceed on the basis of full information and also an opportunity for TNSPs and AEMO to engage with a view to resolving differences in assumptions or methodology.
- TNSPs should engage with AEMO at the first opportunity after it becomes apparent that there is a difference between AEMO assessment of *NSCAS need* and TNSP articulation of its plans. The rule change should also consider strategies for dealing with circumstances where TNSPs may be justified, due to lack of funding, in ignoring an unmet AEMO assessment of *NSCAS need*. Unnecessary delay in delivering a market benefit should be avoided wherever possible.

7.2 Summary and implications for the NEO

In summary, subject to the minor adjustments noted above, the proposed rules seem appropriate and have the ability to facilitate good outcomes whenever last resort procurement processes are invoked – certainly better outcomes than those facilitated by existing arrangements.

However, efficient outcomes in the network support and control service space – and outcomes in the long term interests of electricity as per the NEO – will rely on three things:

- clear assignment of responsibility and accountability for both intra- and inter-regional network capability
- providing maximum incentive for TNSPs to focus their efforts on delivery of service outcomes rather than management of assets

- ensuring application of the RIT-T incorporates an appropriate balance of consideration of both network and non-network options.

If the market achieves these things, then the last resort procurement process will play very little, if any, role in the delivery of network support and control services.

Glossary

AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
AER	Australian Energy Regulator
APR	annual planning review
DNSP	distribution network service provider
generic NSCS	network support & control services delivered by either TNSPs or AEMO
last resort procurement	procurement and delivery of 'last resort' network support & control services
NCAS	network control ancillary services
NEMMCO	National Electricity Market Management Company
NEO	national electricity objective
NEL	national electricity law
NER	national electricity rules
NGF	National Generators Forum
NSCAS	network support & control ancillary services
NTNDP	national transmission network development plan
NTP	National Transmission Planner
RIT-T	regulatory investment test for transmission
TNSP	transmission network service provider