11 November 2013

Mr John Pierce
Chairman, Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

Lodged via email: www.aemc.gov.au

Dear Mr Pierce

Proposed rule change: System Restart Ancillary Services

The purpose of this letter is to formally request, on behalf of entities comprising the National Generators' Forum and the named privately owned and publicly listed companies (the Proponents), that the Australian Energy Market Commission initiates a National Electricity Rule change process relating to the System Restart Ancillary Services (SRAS) Objective and the System Restart Standard (SRS or Standard).

The Proponents have determined, partly informed by the SRAS review undertaken by the Australian Energy Market Operator (AEMO), that there are a number of deficiencies relating to existing SRAS framework. First, there is a need to strengthen the system restart arrangements by removing a number of uncertainties that have been identified by the AEMO and industry participants. Second, there is a need to improve the governance arrangements around the ability of the AEMO to undertake its designated role.

A clear demarcation is required to delineate the individual roles and responsibilities under the SRAS framework to ensure decisions are made in a transparent and accountable manner. The Proponents consider a functional separation between who determines the SRS and who implements the SRS is critical to minimising the potential for a conflict of interest where too much risk for managing a major supply disruption is allocated in a single entity. The Proponents also consider adequate consideration is required for the technical implementation of the SRS with consultation between AEMO and the network service providers that own the assets concerned and the jurisdictions in which they operate.

The proposal, if implemented, will have the effect of resolving these concerns by ensuring functional separation – critical to ensure the SRAS procured is consistent with the SRS over time – promotes confidence in the SRAS framework to deliver efficient outcomes, consistent with the National Electricity Objective. This includes ensuring:

- an economically efficient level of SRAS is procured commensurate with the economic benefit from minimising the expected economic cost of a major supply disruption;
- commercial drivers under the SRAS framework are adequate to promote efficient investment in SRAS services for the long term interests of consumers; and
- technical aspects under the SRS are given adequate consideration to ensure the reliability, safety and security of the national electricity system is promoted.

The proponents consider the proposal a workable solution that captures matters raised by a range of parties. Should you have any queries in relation to this proposal please do not hesitate to contact the undersigned, Mr Jamie Lowe on (02) 9372 2633 or Mr Tim Reardon on (02) 6232 7790.

Yours sincerely,

Jamie Lowe
Chairman, Private Generators' Group
on behalf of the listed companies

Tim Reardon
Executive Director
National Generators Forum

The Proponents:

Proposed rule change: System Restart Ancillary Services

1. Background

System Restart Ancillary Services (SRAS) are ancillary services that provide energy to allow power stations to be restarted and connections to be re-established following a major supply disruption in which power stations are disconnected from the power system. The National Electricity Rules (NER or Rules) set out the framework for: (1) determining the level of restart service required and procuring that efficient level of SRAS; and (2) defining the roles and responsibilities for undertaking these important activities.

At a high level, the NER requires the Reliability Panel to determine System Restart Standard (SRS or the Standard) with the Australian Energy Market Operator (AEMO) responsible for implementing that Standard. When the Australian Energy Market Commission (AEMC) established the existing framework in 2006,[1] separating these clear roles was a key objective:

> "Not only are these separate skills, separation of the roles removes the potential for conflict of interest and will give tenderers [of SRAS] greater confidence in the tendering process."[2]

This functional split allows for an effective allocation of risk for managing a major supply disruption. Where too much risk is allocated to a single body to manage the consequences of a major supply disruption, the resulting conflict of interest creates a risk for the rest of the market. For example, should the entity place more weight on the consequences of a supply disruption or the overall cost of procuring those services? As such, the Proponents see this separation of roles as critical to ensuring the integrity of the SRAS framework.

In executing their SRAS responsibilities, both AEMO and the Reliability Panel must have regard to the SRAS objective, defined in NER clause 3.11.4A (a):

> The objective for *system restart ancillary services* is to minimise the expected economic costs to the *market* in the long term and in the short term, of a *major supply disruption,* taking into account the costs of supplying *system restart ancillary services,* consistent with the *national electricity objective* (the *SRAS* objective).

In its 2006 Determination, the AEMC confirmed the SRAS objective is an outcome-focused objective, which recognises:

> "that the economic aim of providing the services is not that they should be provided in such a way as to only minimise the cost of provision in the short term but to be delivered in an economically efficient manner that minimises the overall economic cost of a major supply disruption."[3]

The AEMC provided the Reliability Panel with the discretion to determine the Standard and develop guidelines for AEMO that promoted the following objectives:

- the economic objective under the SRAS framework;
- the efficient levels of commercial participation in SRAS markets; and
- the safe, secure and reliable supply of electricity, recognising the technical network limitations.

While the Proponents support the principles of this framework and its checks and balances, some significant gaps have come to light through AEMO's review of SRAS, indicating there is not a clear functional separation between who determines and implements the SRS. This has lead to a reduction in transparency between the respective roles and responsibilities of the Reliability Panel and AEMO and which is accountable, creating a perception of a conflict of interest with AEMO determining by default what is an acceptable cost of a major supply disruption and appropriate cost of procuring SRAS.

[1] AEMC 2006, Final Rule Determination and Rule for SRAS and pricing under market suspension Rule 2006, Sydney, 20 April 2006.
[2] AEMC 2006, SRAS Final Rule Determination, p.22.
[3] AEMC 2006, SRAS Final Rule Determination, p.14.

The Rules provide the principles to be covered under the SRAS framework but insufficient prescription as to the respective roles and responsibilities of the Reliability Panel and AEMO. The Proponents, therefore, consider greater prescription in the Rules is required to address these issues and reduce the risk of a conflict of interest where there is insufficient functional separation between who determines and implements the SRS. The Proponents consider this separation is critical to ensuring adequate consideration is given to the economic, commercial and technical aspects under the SRAS framework.

2. Identifying the problem

The integrity and effectiveness of the SRAS framework depends on the Reliability Panel:

- clearly defining and assessing the implementation of the SRS; and
- establishing supporting guidelines that provide AEMO with sufficient structure to determine and procure an economically efficient level of SRAS.

In December 2012, AEMO commenced a review on the procurement of SRAS in light of increased costs associated with meeting the SRAS objective. The range of issues coming to light through this review suggests that the balance of guidance and prescription is not set at the optimal level. For example, the review is debating the definition of a "major supply disruption" – is it national or regional or somewhere in-between, is the current Standard currently being met, and if not, what is the actual Standard?

These are substantive issues and go beyond the scope of procuring SRAS. That AEMO finds itself proposing changes to or seeking to clarify these key elements suggests AEMO is holding an inefficient level of risk and responsibility for managing a major supply disruption. For example, by changing the definition of SRAS, interpreting how an efficient cost of procurement of SRAS is determined and assumptions under the system restart plan.

The Reliability Panel process for setting the SRS in 2012 illustrates the ambiguities in the current framework. AEMO provided advice to the Reliability Panel in 2011 to assist in finalising the SRS; however, there was limited transparency around the analysis undertaken by the Reliability Panel of AEMO's advice. This included advice to redefine the restoration timeframe to a 'target timeframe.' Specifically, there was an absence of revealed analysis on the expected economic cost of restoring supply beyond the timeframes specified in the SRS. In addition, a key element missing in the SRS consultation in 2012 was analysis on what the Reliability Panel expected the economic cost of a major supply disruption to be to the Australian economy. This gap leaves AEMO without a critical reference point to inform its own decisions around SRAS procurement and leaves the community and stakeholders with untested expectations.

These omissions create ambiguity between executing the distinct roles to define and implement the Standard. They raise concerns around the level of transparency in making decisions and the potential conflicts of interest arising from the dual role. The end result is a sub-optimal outcome for end use consumers where inadequate consideration is given to:

- the economic costs under the SRAS objective;
- the commercial participation in SRAS markets is not promoted; and
- identifying technical network limitations and promoting the safe, secure and reliable supply of electricity.

While AEMO has not yet concluded its review, what has become apparent to the Proponents of this rule change proposal is there is a need to address the high level of complexity and ambiguity in the NER around the practical roles, responsibilities and accountabilities in the SRAS framework. If implemented, this rule change proposal, would improve the governance arrangements in the SRAS framework by clarifying the roles, responsibilities and accountabilities and instil greater confidence in the ability of the Panel and AEMO to discharge their roles in accordance with the SRAS objective and Standard.

3. Nature of the proposed changes

While the proponents do not consider a further comprehensive review of SRAS is required, it is clear that a number of modest changes would strengthen the existing framework and provide greater confidence to consumers, participating jurisdictions and provide clearer guidance for AEMO, the Reliability Panel and market participants more broadly.

First, while the SRAS objective guides the Standard, the framework is missing a check that confirms that AEMO has procured a combination of services that is consistent with the Standard. This includes appropriate checks and balances to provide greater certainty that the level of services being procured ensures, or provides a reasonable likelihood that the network can be energised in timeframes consistent with the restoration targets. There may be situations, however, where the restoration timeframe cannot or will not be met or where the cost of doing so could be prohibitively high. In these unique cases, key stakeholders should be advised as such to facilitate a policy discussion or debate with jurisdictions regarding the level of restart risk the community is willing to accept and the expected economic costs involved.

Second, whilst industry supports the centrality of AEMO's role, especially in choosing the required combination of services, there is scope to better utilise the expertise of participating jurisdictions, network service providers and SRAS providers within the current arrangements. This includes providing advice to the Reliability Panel, that the Panel should then assess, and a requirement for AEMO to consult with network service providers on arrangements for energising adjacent electrical sub-networks. This will provide greater confidence that the SRAS objective will be met and enhance existing administrative arrangements as well as increasing transparency and accountability.

Third, the proposal seeks to clarify in the Rules that the SRAS objective contemplates multiple region events. The Proponents consider the purpose of SRAS is to enable the system to recover from a system-wide black event. It is an insurance product for the market. Preparing for the worst case scenario also provides the capability to recover from lesser events and removes the uncertainty of what contingencies may or may not be contemplated.

Fourth, where AEMO seeks to make a change within its scope of responsibility, it is important for there to be a transparent process and robust assessment to confirm such changes would not adversely affect the overall SRS. The proposal seeks to ensure AEMO has the flexibility necessary to discharge its responsibilities under the SRAS framework, but adds additional checks to limit unintended consequences that could put at risk the overall Standard.

Finally, while the governance framework under the SRS may be adequate in-principle, the Proponents consider greater prescription is required in the Rules around how the Reliability Panel undertakes its functions and meets its objectives. The proposed changes improve the transparency of the Reliability Panel's decision-making, including assessing advice provided to it by third parties, like AEMO. Such improvements provide greater certainty for the market around the robustness of the Reliability Panel's decisions.

The Proponents consider these proposed changes strengthen the SRAS framework by removing the current uncertainty around the roles and responsibilities, particularly for AEMO, the Reliability Panel and other key participants. These changes help improve transparency and certainty around key decisions required to set and deliver the Standard and the SRAS objective, more broadly.

4. Summary of the proposed changes

Further to above, the proposed changes are summarised below.

- Clarify the Reliability Panel determines the Standard on the basis of advice from AEMO and other relevant stakeholders.
- Clarify the guidelines and acquisition of SRAS applies to NEM-wide and multiple region events.

- Support AEMO's preference that the distinction between primary and secondary services be removed.
- Require AEMO to assess the maximum amount of time each type of service will restore power and the manner in which each type of service will be relied upon to restore energy in neighbouring electrical sub-networks.
- Provide guidance on and demonstrate where each electrical sub-network can be energised from an adjacent electrical sub-network.
- Require the Reliability Panel to approve amendments to a number of relevant guidelines.
- Strengthening the link between the NER and the Standard.
- Linking restoration timeframe targets and service procurement, and requiring AEMO to detail where a service has been procured which will not met restoration targets and the possible impact on sensitive loads in the Standard.
- Placing an obligation on AEMO to consult with network service operators and advise the Reliability Panel of any outstanding issues.
- Require AEMO to publish a methodology for assessing restoration under system black conditions and requiring appropriate modelling where material changes are identified or proposed.
- Strengthening the link between the Reliability Panel's *Annual Market Performance Review* and system restart reporting.

Each of the proposed clause amendments is contained in the table that concludes this document and is discussed further below.

5. The proposed changes in detail

While each of the changes, with a short summary, is presented in the table that concludes this paper, the rationale behind the changes is presented in this section.

5.1. Purpose of the Reliability Panel

The purpose of the Reliability Panel is to determine the Standard pursuant to NER clause 8.8.1 and ensure the procurement of sufficient SRAS consistent with the SRS. At present, the Standard is determined by Reliability Panel on the advice of AEMO. The Proponents consider the Rules should recognise more formally the provision of advice by a broader range of parties who also have technical expertise and a requirement for the Reliability Panel to assess the advice provided to it.

While the Reliability Panel can seek advice from a wider set or sub-set of industry participants, formalising this in the Rules provides confidence that the importance of the Standard to participating jurisdictions, the practical and technical experience and expertise of network service providers, and the testing experiences of SRAS providers is taken into consideration in developing any changes to the Standard. This can help maintain an appropriate separation between setting the standard and AEMO's role in implementing it.

5.2. SRAS objective

There has been significant debate as to whether the SRAS objective relates to NEM-wide system black events – and by inference other multiple region events – or whether it can be read to apply only to individual events in each region. This uncertainty goes to the policy intent of SRAS and the purpose of the SRAS objective and is resolved by the proposed minor wording amendment.

The general understanding has been that, while a NEM-wide system black condition was unlikely, SRAS was procured for the purpose of re-energising the network in the event of such an NEM-wide system black condition as a worst case scenario. By implication every lesser form of system black, cascading down from multiple regions, multiple sub-electrical networks, a single region and single sub-electrical networks could be resolved by procuring the level of service required to meet a NEM-wide system black condition.

The level of ambiguity in the Rules has left AEMO to make a decision on what it defines as a "major supply disruption". In its current SRAS Review, AEMO's view is that procuring services for a single region system black event is the most appropriate course of action. In the Proponents view, however, this interpretation goes to the intent of the Standard and even the SRAS objective, itself, and therefore should be clarified as part of the framework under which AEMO makes its operational decisions. As such, this debate should take place in setting the overarching framework. Making this clarification should not reduce AEMO's flexibility in procuring services and focusing on ways to meet the standard in the most economic way.

It is the Proponents' view that the SRAS objective should clarify that a major supply interruption "includes but is not limited to a NEM-wide or multiple region event". While the likelihood of a NEM-wide or a multiple region event is remote, the low risk but high impact nature of such an event is the rationale for procuring SRAS. This is because any form of system black condition would cause significant economic damage and failure to restore power within as short a timeframe as possible would be unacceptable to the community.

Estimating the economic cost of a major supply disruption is inherently difficult and is why AEMO has previously maintained SRAS "outputs are measured in physical rather than economic terms due to the difficulty in linking individual actions to probable savings". Notwithstanding this difficulty, the expected economic cost of an outage would consist of the unserved energy caused by the outage and the cost of the unserved energy, measured by the value of customer reliability. In discussing the economic cost of a major supply disruption and the cost of supplying SRAS, AEMO commented previously in providing advice to the Reliability Panel:

> "If we assume that cost of unserved energy to be of the order of $50,000 per MWhr, then this annual cost would be justified if the presence of these services reduced the level of unserved energy by about 15,000 MWhrs for a 1 in 20 year event (by, say, achieving an overall reduction in restoration time by 1 hour for a total interrupted load of 15 GW)."[4]

5.3. Form of services and the strategic location and diversity of SRAS

AEMO has expressed the view that it will improve flexibility in procurement if the current delineation between primary and secondary services is removed. The Proponents support this view. AEMO should be able, guided by the SRAS objective and the Standard, to select any combination and form of services on offer to meet the Standard at an efficient cost while allowing for adequate consideration of economic, commercial and technical considerations, consistent with the National Electricity Objective (NEO). There are a number of amendments to the Rules and the Standard required for the purpose of removing the distinction between primary and secondary services.

The SRAS framework was, however, determined on an 'outcome' based approach: the SRS should be measured in physical rather than economic terms where supply should be restored to a specified level by a 'maximum' specified time. To achieve this, the strategic location and diversity of SRAS is critical to ensuring the 'robustness' of the SRAS framework, ensuring the consistent procurement of sufficient SRAS to achieve the SRS and maintain confidence in the SRAS tendering process.

While flexibility over the number and form of services is critical for AEMO to discharge its functions, consistent with the strategic location and SRAS diversity guidelines, it is imperative the industry, participating jurisdictions and consumers are made aware of the procedures for determining the number, type and location of services for each electrical sub-network. The existing guidelines require strengthening to account for a number of matters. This strengthening is brought about by ensuring the guidelines advise how the form of service outlined are expected to re-energise each electrical sub-network and likely restoration times.

[4] AEMO 2011, Reliability Panel determination of system restart standard, letter of advice from AEMO to the Reliability Panel, Melbourne, 12 October 2011. p. 2.

None of these arrangements are put in place to reduce AEMO's ability to procure an alternative form of services or an alternative combination of services within a single region. In fact, it is possible AEMO may elect to reduce services in one region and increase reliance on a greater number of services in an adjacent region; however, if this is the case, as with all its procurement decisions, AEMO would need to be able to demonstrate or give an appropriate indication that the type, number and location of services procured is appropriate.

To assist with transparency, the proponents recommend the Reliability Panel only approve any changes made to the guidelines relevant to the form of services procured after independent analysis and publication of the rationale for approval. These guidelines are the SRAS assessment guidelines, the SRAS quantity guidelines and the SRAS description. This additional cross check can increase confidence in AEMO's processes and ensures the Reliability Panel and AEMO have a shared expectation and understanding of the practical implementation of the SRAS framework.

5.4. System Restart Standard

The proponents are seeking a number of changes to the Standard, particularly the level of detail specified in the Standard itself.

First, the Reliability Panel is the custodian of the Standard. The Rules should clearly state that the existing Standard stands until such time as amended by the Reliability Panel; this clarifies any uncertainty that may exist as to what is the effective SRS. As the custodian, the Reliability Panel is responsible for ensuring there is sufficient clarity and transparency in setting the standard and in the substance of the standard itself. Providing an appropriate level of guidance allows AEMO to discharge its responsibilities in an efficient manner; this gives the market greater confidence in the overarching framework.

Second, the Proponents recommend strengthening the link between the SRAS objective and the Standard by enunciating the major components of the SRAS objective being economic cost, major supply disruptions and costs of supply. Consistent with the NEO, the SRAS objective should promote efficient investment in SRAS and the safe, secure and reliable operation of the network, including:

- clarification of the form of assessment of economic costs is necessary to ensure a simple assessment based on offer prices by SRAS providers or potential SRAS providers is not used as the sole determinant of a successful bidder; and
- linking the definition of major supply disruption with a NEM-wide or a multiple region event is needed to support the SRAS objective, as the definition of major supply event in the Rules is too broad. Thus clarification in the Standard without attempting to change the definition in the Rules is considered an appropriate balance.

These changes will ensure AEMO procures the number, type and location of services that: best support a multiple region or NEM-wide system black condition; take into account all the economic costs and benefits; and considers the prices offered by competing bids as part of the competitive tender process. This moves away from an environment where decisions may be driven by only one or none of these key considerations.

Third, the restoration timeframes within the Standard form an obligation and not a target. While this may appear obvious it has only become clear through AEMO's recent SRAS review that the current level of SRAS procured may not actually meet the restoration timeframe under the Standard under any condition. The questions that therefore arise are: what level of service is currently provided; is this consistent with identifying the maximum amount of time within which supply is restored to a specified level; and where the restoration timeframe cannot be met, what is the expected economic cost from an increase is restoring supply to a specified level over successive hours?

The Proponents are of the view that the current "soft target" can be turned into a "hard target" with additional clarification in the Rules and the Standard. The aforementioned changes to the Rules will require AEMO to indicate how much time any combination of services will take to restore power in the event of a black system event. The supporting new clause in the Standard links the guidance provided in the Rules with

the Standard and has the effect of linking restoration timeframes with actual services procured. When combined with reporting and extended guidance, this will ensure greater transparency around what has been procured, and why, and assist to justify any decision to not procure additional services on the basis of cost.

Fourth, to support flexibility in procurement, the clause relating to reliability of services should be amended to remove references to primary and secondary services and extended to provide for a range of reliability expectations for each form or type of service AEMO may elect to procure or consider procuring. For instance, AEMO could include a single service with reliability in excess of 95 per cent, for example, or multiple services of lower reliability. The new clause references the SRAS description as the usual benchmark with flexibility for AEMO to extend below or above this where there is a cost benefit trade-off.

Fifth, the role of network service providers should be formalised. The expertise of network service providers is a valuable asset in understanding the availability and technical limitations of the transmission system. This knowledge is a critical component when restoring supply to the power system following a major supply disruption. For this reason, the Standard should be amended to require AEMO to engage with networks service providers. This is expressly relevant for determining the ability to re-energise electrical sub-networks and technical limitations of the wider network.

Sixth, there is little appetite to require AEMO to undertake unnecessary and regular testing or modelling; however, where material changes are identified, AEMO should be mindful and give consideration to the need for formal modelling. Where, in its discretion, AEMO determines modelling is not required; AEMO should be required to present a methodology for assessing restoration timeframes even if the methodology is largely qualitatively driven.

It is clear that not all system restart tests that occur are taken into account by AEMO in developing a system restart plan and AEMO does not have an established methodology for demonstrating whether or not the Standard could actually be met. The Proponents consider AEMO should develop a methodology to demonstrate the potential effectiveness of the system restart plan - supported by testing and updated when changing network conditions are relevant - to improve in governance and transparency.

Finally, for the avoidance of doubt, AEMO must provide the Reliability Panel with an overview and relevant analysis of SRAS tests since the Reliability Panel's last *Annual Market Performance Review* and whether AEMO has formed a view that alternative combinations of SRAS would better meet the same level of service at a more efficient cost as well as any other matter AEMO determines as appropriate.

6. How the Rule satisfies the National Electricity Objective

As with all proposed changes to the NER, this proposal must meet and support the NEO. The NEO is stated in section 7 of the National Electricity Law:

> "... 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 Proponents have carefully considered the benefits of the change against the NEO and are of the view the proposal supports the NEO.

The Proponents have reached this conclusion as the proposal:

- will improve governance arrangements and ensure there is greater transparency in the setting of key parameters;
- enhances AEMO's ability to procure a flexible range of services by type, location and duration;
- improves risk allocation between parties;

- facilitates better engagement between AEMO and network service providers who play a critical role following a system black event and to ensuring rapid restoration;
- provides stability and clarity around the SRS which will better facilitate investment in assets that can compete in the provision of SRAS; and
- provides greater confidence in the SRAS framework to deliver efficient outcomes so as to better meet the expectations of the community and sensitive large loads.

Each of these points is discussed below.

The proposal will improve the governance arrangements around the SRAS objective and ensure that there is greater transparency and recourse for the Reliability Panel in the setting of key parameters that underpin the procurement of black start services to meet the SRAS objective. The clarity around allocation of roles and the inclusion of checks and balances, previously absent, significantly improves the governance framework and increases confidence the SRS will be achieved.

Importantly, the proposal enhances AEMO's ability to be flexible in the range of services it procures, over its desired timeframes and location. This was a key finding in AEMO's review of SRAS and is appropriate. While some of the proposed changes could increase reporting or compliance costs against services procured, this impost is appropriate and proportionate considering the broader benefit to the market and ultimately end use consumers.

Good regulatory practice allows for the effective allocation of risk to entities that are capable managing the risk and clarifies the roles and responsibilities of each entity to facilitate transparent and accountable decision making. Under the SRAS framework, the allocation of risk and functional separation between the entity that determines and implements the standard is critical to minimise the risk of a conflict of interest. Functional separation allows for adequate consideration of the expected economic cost of a major supply disruption and efficient cost of procuring SRAS, in addition, to the commercial arrangements supporting investment in SRAS and recognition of limitations in the national electricity network consistent with the NEO.

There is an inherent uncertainty as to the condition of the national electricity system following a major supply disruption. As such, network service providers play an important role in restoration processes and adequacy of services. An important but previously overlooked issue is the interface between AEMO and network service providers. The nature of that relationship has been better illustrated as part of AEMO's review of SRAS and has been a consideration in the development of the proposal by the Proponents. The rule proposal seeks to enhance the reliability and safe operation of the network where AEMO is required to consult with network service providers to give adequate considerations to limitations and adhere to guidelines to recognise strategically significant locations within the network, Additionally, procurement of a diverse range of SRAS to enhance the robustness of the Standard to ensure the safe and secure operation of the national electricity system best occurs with reference to network limitations identified by network service providers.

SRAS providers require a stable regulatory regime to have the confidence to invest in maintaining the capability of the long lived equipment and resources that underpin their SRAS capability. The proposal would increase confidence in this market by creating a more stable and predictable regulatory regime for SRAS.

The availability of reliable SRAS increases the likelihood that the system is returned to a normal operating state within the restoration timeframe to minimise the expected economic cost of a major supply disruption. The potential for a major supply disruption is also dependent on the time taken to restore supply. A shorter restoration time means the level of unserved energy and the economic cost of the supply disruption is minimised. The proposal has been drafted so as to encourage closer assessment by the Reliability Panel of the expected economic cost of a major supply interruption to better inform discussions with AEMO on what an efficient cost of procuring SRAS is so as to minimise the costs to the market.

In the Proponents view, the sum of the changes proposed, will promote greater confidence in the SRAS framework and will deliver efficient outcomes, consistent with the NEO by ensuring:

- an economically efficient level of SRAS is procured commensurate with the economic benefit from minimising the expected economic cost of a major supply disruption;
- commercial drivers under the SRAS framework are adequate to promote efficient investment in SRAS services for the long term interests of consumers; and
- technical aspects under the SRS are given adequate consideration to ensure the reliability, safety and security of the national electricity system is promoted.

Improving the quality and robustness of the SRAS framework should ensure better alignment between SRAS roles and expectations being: community expectations, as expressed by policy makers within individual jurisdictions; oversight by the Reliability Panel; SRAS procurement by AEMO; and investment by SRAS providers. This alignment should deliver maximum benefit to consumers.

The proposed changes are detailed in the table that follows.

The SRAS Proposal - the following table details proposed changes to the National Electricity Rules and the System Restart Standard itself.

Current Clause / Provision	Suggested New Clause / Provision (Additions bolded)	Rationale
National Electricity Rules		
8.8.1 Purpose of Reliability Panel		
(1a) on the advice of *AEMO*, determine the *system restart standard*;	(1a) **having regard to advice** from *AEMO,* ***Network Service Providers, system restart ancillary service*** **providers,** ***participating jurisdictions***, ***Market Customers, Market Generators*** **and relevant stakeholders** determine the *system restart standard*;	The Reliability Panel is responsible for determining the system restart standard and should draw upon the knowledge and resources of a range of parties. Existing reliance only on the input of AEMO is considered inconsistent with the broader range of stakeholders and participants required to ensure the system restart standard can be met.
3.11.4A Guideline and objectives for acquisition of system restart ancillary services		
(a) The objective for *system restart ancillary services* is to minimise the expected economic costs to the *market* in the long term and in the short term, of a *major supply disruption*, taking into account the cost of supplying *system restart ancillary services*, consistent with the *national electricity objective* the *SRAS objective).*	(a) The objective for *system restart ancillary services* is to minimise the expected economic costs to the *market* in the long term and in the short term, of a *major supply disruption*, **including but not limited to a NEM-wide or multiple region event**, taking into account the cost of supplying *system restart ancillary services*, consistent with the *national electricity objective* the *SRAS objective.*	There has been significant debate as to whether the SRAS objective purports to relate to NEM-wide system black events or individual events in each region. AEMO's analysis in this area has been less than satisfactory and participants believe the SRAS objective should specifically make reference to NEM-wide or multiple jurisdiction events.
(c)(3) designed to ensure that the need for *System restart ancillary services* in each *electrical sub-network* is met, to the	(c)(3) designed to ensure that the need for *System restart ancillary services* in each *electrical sub-network* is met, to the extent that	The proponents support AEMO's preference that the distinction between secondary and primary services be removed.

extent that it is practicable and reasonable to do so, by *AEMO* entering into *ancillary services agreements* for the provision of *primary restart services*.	it is practicable and reasonable to do so, by *AEMO* entering into *ancillary services agreements* for the provision of ***system*** *restart* ***ancillary*** *services.*	AEMO should be able, guided by the SRAS objective and System Restart Standard, to select any combination and form of services on offer to meet the System Restart Standard at least cost.
(d)(1) whether the *system restart ancillary service* is a *primary restart service* or a *secondary restart service;*	**[delete]**	Consistent with amendment to rule 3.11.4A(c)(3) above this clause is redundant.
[New clauses]	**(d)(4) the maximum amount of time within which each type of *system restart ancillary service* will restore power in accordance with its specified service; and** **(d)(5) the manner in which each type of *system restart ancillary service* will be relied upon to energise neighbouring *electrical sub-networks*.**	The current guidance around the SRAS description is inadequate and linkage to restoration times and flow paths is required.
(f) *AEMO* must develop and *publish* the procedure for determining the number, type and location of *system restart ancillary services* required to be procured for each *electrical sub-network* consistent with the *system restart standard* determined by the *Reliability Panel* (the SRAS quantity guidelines).	(f) *AEMO* must develop and *publish* the procedure for determining the number, type and location of *system restart ancillary services* required to be procured for each *electrical sub-network* consistent with the *system restart standard* determined by the *Reliability Panel* (the SRAS quantity guidelines) **and must identify:** **(1) the maximum amount of time within which power is expected to be restored within each *electrical sub-network*; and** **(2) with a reasonable degree of certainty demonstrate the extent to which each**	There has been considerable debate, arising from TNSP and participant dissatisfaction with current evidence, around the validity of proposed restart arrangements particularly where it relates to meeting targets and energising between regions and sub-networks. These additions augment AEMO's existing obligations to report by ensuring that they have a defensible basis for the form of services within each electrical sub-network and can demonstrate how that arrangement of services will contribute to restart in other sub-networks and regions.

	***electrical sub-network* can be energised from an adjacent or other *electrical sub-network*.**	
(g) *AEMO* may amend the *SRAS* assessment guidelines, the *SRAS* quantity guidelines and the *SRAS description.*	(g) *AEMO* may amend the *SRAS* assessment guidelines, the *SRAS* quantity guidelines and the *SRAS description* **as approved by the Reliability Panel.**	Clarification is required to ensure AEMO as advisor has the approval of the Reliability Panel who are the custodians of the SRAS objective and System Restart Standard. Presently, there is a lack of governance structure to ensure the steps taken by AEMO are consistent with the SRAS objective and the System Restart Standard and are appropriately vetted. This change, read in conjunction with changes to the System Restart Standard, to ensure AEMO seek technical advice from TNSPs allows the Reliability Panel to have greater certainty over AEMO's advice and does not require the Reliability Panel to revise or retest AEMO's recommendation in approving changes.
System Restart Standard		
1 Introduction		
. . .the purpose of this standard is to provide guidance and set a benchmark to assist the Australian Energy Market Operator (AEMO) in procuring sufficient system restart ancillary services (SRAS) to meet the requirements of the National Electricity Market (NEM). This standard is effective from 1 August 2013.	. . .the purpose of this standard is to provide guidance and set a benchmark to assist the Australian Energy Market Operator (AEMO) in procuring sufficient system restart ancillary services (SRAS) to meet the requirements of the National Electricity Market (NEM). This standard is effective from 1 August 2013 **and until such time as amended by the Reliability Panel.**	Clarify responsibility for the System Restart Standard sits with the Reliability Panel. There has been significant criticism that AEMO has acted in a manner which suggested it determines the System Restart Standard and the Reliability Panel's involvement is procedural. Participants strongly dispute this view and this minor change will go a way to clarifying the Reliability Panel

		as the custodian.
2.Requirements of the standard **The requirements of the standard are specified under clause 8.8.3(aa) of the Rules which state that**		
1. be consistent with the SRAS objective referred to in clause 3.11.4A(a)	1 be consistent with the SRAS objective referred to in clause 3.11.4A(a); **(a) economic cost requires consideration of the total opportunity costs, financial, social and non-financial, to energy users and the market, generally and to specific sensitive loads.** **(b) *major supply disruption* refers the unplanned absence of voltage on a part of the transmission system affecting one or more power stations including a NEM-wide or multiple region event.** **(c) cost of supply refers to the offer price of competing options to meet the SRAS objective.**	The guidance in the System Restart Standard does not appropriately reference the key criteria included in the SRAS objective. Inclusion of the additional wording clarifies and strengthens direction to AEMO which is currently absent. This should flow directly into the development of guidelines by AEMO.
4. include guidelines on the required reliability of *primary restart services* and *secondary restart services*.	4. include guidelines on the required reliability of ***system restart ancillary services.***	Remove the reference to primary and secondary services given general support for this change as indicated above.
5. include guidelines to be followed by AEMO in determining *electrical sub-networks*, including the determination of the appropriate number of *electrical sub-networks* and the characteristics required within an *electrical sub-network* (such as	5. include guidelines **approved by the Reliability Panel** to be followed by AEMO in determining *electrical sub-networks*, including the determination of the appropriate number of *electrical sub-networks* and the characteristics required within an *electrical sub-network* (such	Strengthen governance arrangements.

the amount of generation or *load,* or electrical distance between *generation centres,* within an *electrical sub-network*;	as the amount of generation or *load,* or electrical distance between *generation centres,* within an *electrical sub-network*;	
6. include guidelines specifying the diversity and strategic locations required of *primary restart services* and *secondary restart services.*	6. include guidelines **approved by the Reliability Panel** specifying the diversity and strategic locations required of ***system restart ancillary services***.	Strengthen governance arrangements and remove reference to primary and secondary services consistent with AEMO's recently expressed preferences.
4. Restoration timeframe		
[Additional clause following existing text]	**While the restoration timeframe is the target timeframe for the purposes of procurement and planning, the restoration timeframe should be able to be met where the purchased *system restart ancillary services* meet the technical and availability requirements outlined in the *SRAS* description in clause 3.11.4A(d) and the network and services perform in accordance with the *SRAS* quantity guidelines in clause 3.11.4A(f).**	The revelation that AEMO has no expectation it can meet the restoration timeframe under the System Restart Standard has been a surprise to industry and policy makers alike. While it is not possible to ensure the timeframe can be met in the face of unknown events the current approach does not represent AEMO's best endeavours to meet the restoration timeframe under reasonable conditions. The new clause links the guidance provided in the rules into the System Restart Standard and for the purposes of linking target timeframes with actual services procured. When combined with reporting and extended guidance this will ensure greater transparency on what has been procured, and why, and assist to justify any decision to not procure additional services on the basis of cost.
[Additional clause following existing text]	**For the purposes of accounting for the economic cost, including impacts on sensitive load, AEMO shall advise participating jurisdictions of the process for determining a combination of *system restart ancillary services* which does not meet the restoration**	AEMO procurement should be informed by the views of the participating jurisdiction since accountability in the event of non-restoration will be politically concentrated at the jurisdictional level. Hence, impacts on sensitive load and decisions to not procure services that would meet the restoration timeframe should not be made by AEMO in

	timeframe.	isolation.
5. Reliability of services		
Primary restart services shall have a reliability of 90 per cent. Secondary restart services shall have a reliability of 60 per cent.	**Each type of s*ystem restart ancillary services* shall have a reliability range referenced in the *SRAS* description unless AEMO, as procurer, determines that a lower reliability range provides an appropriate trade-off, consistent with the *SRAS objective,* or a greater standard of reliability is required given the characteristics of the specified *electrical sub-network*.**	AEMO should have maximum flexibility to procure the form of service in each electrical sub-network that provides the best services at least cost. This could include a single service with reliability in excess of 95 per cent, for example, or multiple services of lower reliability. The new clause reference the SRAS description as the usual benchmark with flexibility for AEMO to extend below or above this where there is a cost benefit trade-off.
8. Network Service Operators [new clause]		
[new clause]	**In order to demonstrate that there is a reasonable degree of certainty that the combination of *system restart ancillary services* within any *electrical sub-network* can meet the technical and availability requirements outlined in the *SRAS* description in clause 3.11.4A(d) and the network and services perform in accordance with the *SRAS* quantity guidelines in clause 3.11.4A(f) AEMO must:** **1. consult with *Network Service Providers* within or adjacent to each *electrical sub-network* prior to each procurement process;** **2. advise the Reliability Panel of any technical issues identified by a relevant *Network Service Provider* that may reduce the likelihood that at**	The expertise of TNSPs cannot be ignored given the availability and technical limitations of the transmission system are a critical component of restoration following an event. For this reason, the System Restart Standard should be amended for the purpose of formally placing a requirement on AEMO to engage with TNSPs for specific ends.

	the time of an event the restoration timeframe will not be met; and **3. consult with *Network Service Providers* on assumptions used in relevant analysis and modelling for the purpose of determining technical arrangements across the network.**	
9. Assessment methodology to support procurement process[new clause]		
[new clause]	**Prior to the conduct of a procurement process AEMO is to publish a methodology for assessing restoration under NEM-wide system black conditions, and multiple region outages, under a number of scenarios.** **This methodology should be supported by modelling where appropriate, updated where significant changes to the power system or other material changes are identified by AEMO that should be taken into account prior to the next procurement process, and a testing schedule over the course of any procurement period.**	It is clear that not all system restart tests that already occur are taken into account and that AEMO does not have an established methodology for demonstrating whether or not the System Restart Standard could actually be met. A measured improvement in governance and transparency is required and a methodology, developed by AEMO, and supported by testing which already occurs and additional testing when relevant given changing network conditions is preferred. Any mandated testing on a regular basis is considered too onerous and therefore AEMO discretion is preferred.
10. Reporting against the System Restart Standard [new clause]		
[new clause]	**For clarity, prior to the intended release of the Reliability Panel's *Annual Market Performance Review AEMO* must:** **1 provide the Reliability Panel with an overview and relevant analysis for any and all**	A consolidate clause identify reporting obligations on AEMO to the Reliability Panel would provide additional transparency and sure up existing governance arrangements. Further, by enunciating the matters that AEMO should

	system restart tests that have been conducted in the NEM since the last *Annual Market Performance Review*; **2 advise the Reliability Panel whether AEMO is of the view an alternative combination of restart services could meet the SRAS objective at lower costs;** **3 identify any issues or concerns arising out of AEMO's management of procurement of *system restart ancillary services* that are likely to reduce the ability of the current combination of services to meet the System Restart Standard; and** **4 advise on any other matters AEMO determines are appropriate.**	report to the Reliability Panel on prior to the Reliability Panel's annual reporting arrangements provides industry confidence that information that is relevant will be shared in a timely manner and not at a latter point by surprise.

4 March 2014

Mr Christiaan Zuur
Australian Energy Market Commission
Email - Christiaan.Zuur@aemc.gov.au

Dear Mr Zuur

Proposed rule change: System Restart Ancillary Services

I refer to our recent conversation and request for supplementary information regarding costs and benefits associated with the abovementioned proposal. As indicated in the proposal document, the proposal, if implemented, will have the effect of resolving a number of concerns by ensuring functional separation promotes confidence in the SRAS framework to deliver efficient outcomes, consistent with the National Electricity Objective, including:

- an economically efficient level of SRAS is procured commensurate with the economic benefit from minimising the expected economic cost of a major supply disruption;
- commercial drivers under the SRAS framework are adequate to promote efficient investment in SRAS services for the long term interests of consumers; and
- technical aspects under the SRS are given adequate consideration to ensure the reliability, safety and security of the national electricity system is promoted.

The improved delineation of roles and improved arrangements will reduce uncertainty and should ensure procurement of SRAS occurs in a manner which minimises costs to industry. In recent times SRAS procurement arrangements have been subject to change which has increased administrative costs and reduced bidding incentives.

The proposed increased responsibilities for the Reliability Panel in reporting on SRAS arrangements as part of the Annual Market Performance Review may lead to a slight increase in costs. While the amended role for the Australian Energy Market Operator is likely to reduce its administrative burden while increasing its flexibility in operation which provides scope for reduced costs over the longer term it may encounter some implementation costs upfront.

Network service providers, participants and others will be consulted in preparing annual reporting and developing the assessment methodology. This may result in some minimal costs; however, these should be significantly less than the costs incurred in ad hoc consultations or through uncertain administration of the framework.

Yours sincerely

Jamie Lowe
Manager, Market Regulation