

27 October 2016

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Dear Mr Henderson

Review of the System Restart Standard: Draft Determination

The Australian Energy Market Operator (AEMO) welcomes the opportunity to contribute to the Reliability Panel's (Panel) review of the System Restart Standard (SRS).

As outlined in AEMO's earlier submission to this review, AEMO relies on the SRS to guide the procurement of System Restart Ancillary Services (SRAS). Clarity in the SRS minimises the potential for different interpretations by AEMO, prospective SRAS providers and other stakeholders.

We have reviewed the draft SRS published in the Reliability Panel's draft determination, and consider there has been a significant improvement in clarity, particularly in relation to the improved integration of diversity requirements into the broader standard. However, there is a number of refinements we believe are worthy of addressing prior to final determination – these are detailed in the attached submission.

If you would like to discuss this submission further, please contact Murray Chapman.

Yours sincerely



David Swift
Executive General Manager – Corporate Development

Attachments: AEMO submission – System Restart Standard Draft Determination

Attachment: System Restart Standard – Submission to Draft Determination

AEMO has reviewed the Reliability Panel’s draft determination on the System Restart Standard (SRS), and considers the draft SRS to be a considerable improvement on the current version in terms of clarity and workability. This is particularly the case in relation to the integration of diversity requirements into the standard. The current version contains relatively independent requirements for diversity, which can give rise to a range of expectations in relation to outcomes. AEMO also considers the proposed draft SRS to be realistic from a procurement perspective.

AEMO’s comments on the draft determination relate to the following areas of process and detail:

- Criteria for determination of electrical sub-networks
- Modification of the SRS when AEMO changes sub-networks
- Key matters AEMO will deal with to give effect to the revised SRS
- Terminology in relation to system restart services.

Criteria for determination of electrical sub-networks

Section 7 of the Draft SRS in Appendix A of the draft determination contains the following three criteria for the determination of sub-networks by AEMO:

- The number and strength of transmission corridors connecting an areas to the remainder of the power system;
- The electrical distance (length of transmission lines) between generation centres; and
- An electrical sub-network should be capable of being maintained in a satisfactory operating state to the extent practicable during the restoration process, and in a secure operating state from a stage in the restoration when it is practicable to do so, as determined by AEMO.

AEMO notes that these criteria are constructed as constraints, or criteria to be satisfied in determining electrical sub-networks, but there doesn’t appear to be an objective set out in the SRS to guide the determination within those constraints. There may be many combinations of sub-network boundaries that satisfy all three of the above constraints, some with many sub-networks and some with fewer sub-networks. That is particularly the case now that the Panel has proposed to remove the existing criterion for a minimum of 1,000MW of generation and load within a sub-network. Without an objective there would be no clarity or shared view of the over-arching aim that AEMO is seeking to achieve in the determination, and so no guidance on how to choose between a range of sub-network options that satisfy the above three constraints.

An objective or aim for the process is therefore a critical element of the guidelines. In its absence, AEMO would need to look beyond the SRS for guidance. The SRAS Procurement Objective set out in clause 3.11.7(a1) of the National Electricity Rules would appear to provide a suitable basis for this purpose. It could be specifically referenced within the SRS or a more focussed objective consistent with the SRAS Procurement Objective could be placed in the SRS to resolve this issue. The SRAS Procurement Objective states that “AEMO must use reasonable endeavours to acquire system restart ancillary services to meet the System Restart Standard at lowest cost”.

AEMO urges the Reliability Panel to give consideration to this matter with a view to including further clarity in the revised SRS as part of its final determination.

Implications of AEMO changing sub-network boundaries

As discussed in section 7.6 of the draft determination, there is currently an open issue in relation to changes to sub-network boundaries which may be determined at any time by AEMO, and the SRS which will now be specified for each individual sub-network. The issue will arise whenever AEMO determines a change to sub-network boundaries, because the changed subnetworks will be without a SRS unless and until the Reliability Panel determines one. Without an SRS for those sub-networks, AEMO will not have a standard against which to carry out procurement of SRAS for those sub-networks.

AEMO considers it important that clarity on the management of this issue be achieved as part of the Reliability Panel's final determination for the current SRS review.

The Reliability Panel has suggested that a limited review of the SRS could be carried out under current regulatory provisions following any change to the sub-network boundaries. This could be possible, but would require careful co-ordination between AEMO and the Reliability Panel because there would need to be adequate time for such a limited SRS review between the time AEMO determines a change to the sub-network boundaries, and the time at which AEMO needs to commence procurement of SRAS for the revised sub-networks. While such an arrangement could work, there is a risk of timing issues arising in some cases.

To avoid this risk, AEMO suggests alternative options be considered. One alternative that might be worthy of consideration is for the Reliability Panel to determine a "default" SRS which would apply to changed sub-networks until the Panel determines a revised SRS for them, but allowing for the continuation of contracts entered into on the basis of the default SRS. Such a default standard could be specified in different ways, but one possibility is for new sub-networks to inherit an SRS based on the SRS of the "parent" sub-networks – for example:

- If a sub-network is sub-divided, the new sub-networks could inherit an interim SRS equivalent to the original one.
- If two sub-networks or parts of sub-networks are combined by AEMO, then the resulting sub-network could have an interim SRS determined by the least onerous combination of parameters from the original sub-networks.

This approach would allow AEMO to proceed with procurement, while also minimising the risk that revision of the SRS by the Panel would require the procurement of less service. On the other hand, if the revision of the SRS necessitated the procurement of more services, AEMO could take action to do so at that time.

AEMO has not stress-tested the above suggestion for a default SRS, or fully evaluated its compatibility with current regulatory arrangements, but puts it forward for consideration by the Reliability Panel.

Terminology in relation to system restart services

System restart ancillary services are generally referred to as "restart service" in the draft determination, but a number of other terms are also used occasionally in the document. For example, page 57 of the draft determination uses the terms "restart services", "SRAS contracts", and "individual generating units", while page 64 also refers to "SRAS sources".

On the other hand, the Deloitte-Access Economics report primarily uses the term “SRAS plants”.

We believe the term “SRAS plants” as used in the Deloitte-Access Economics report is intended to be interpreted similarly to the term “restart services” in the draft determination.

Given the methodology used to derive the SRS, and its reliance on analysis of the relationship between number of restart services procured by AEMO and the time and reliability of restart, AEMO suggests there is merit in the Reliability Panel clarifying and standardising the terminology used in the documents to avoid the potential for misinterpretation. We suggest a hierarchical relationship between terms along the following lines:

- SRAS contract – a contract between AEMO and a SRAS provider, which may contain the terms relating to procurement of one or more restart services.
- Restart service – a service procured under contract by AEMO towards meeting SRS, which may involve the operation of one or more SRAS units.
 - Restart service would appear to have a meaning similar to or the same as restart source and SRAS plants used in other places.
- SRAS units – individual generating units that form part of a restart service.

Key matters AEMO will deal with to give effect to the revised SRS

Section 6.9 of the draft determination indicates that the Reliability Panel proposes to make the revised SRS effective on 1 July 2018. AEMO’s current SRAS contracts will remain current until June 2018, and have an option for extension by 1 year at AEMO’s discretion, and a further option for extension by a further year by agreement between the parties.

Following finalisation of the SRS by the Reliability Panel in December 2016, AEMO will need to carry out the following steps prior to undertaking procurement in accordance with the revised SRS:

- Review sub-network boundaries under the revised sub-network guidelines in section 7 of the SRS.
- Make a new SRAS Guideline¹ in accordance with clauses 3.11.7(c) and 11.81.3, to confirm or revise, as appropriate:
 - the methodology to be used for calculating the aggregate reliability of restart services within each electrical sub-network;
 - the processes for assessment and testing of services, and determining the number and location of services required; and
 - AEMO’s SRAS procurement procedures to take into account the changes specified in the System Restart Ancillary Services rule change determination.

AEMO considers these steps can be completed in time to accommodate the Reliability Panel’s proposed date of 1 July 2018 for the revised SRS to take effect, assuming:

- The final determination is made in line with current timing expectations; and
- It is not necessary for the Reliability Panel to revise the SRS before that date if AEMO changes the boundaries of electrical sub-networks.

¹ The current SRAS Guidelines are available at: <https://www.aemo.com.au/media/Files/Electricity/Market%20Operations/SRAS/2015/SRAS%20Guidelines.pdf>

AEMO notes that the procurement process itself, including tendering, technical assessment of candidate SRAS sources, finalisation of new contracts and amendment of the system restart plan, cannot occur until after the SRAS Guideline has been finally determined. The Panel and interested stakeholders should be aware that this may necessitate an extension of the existing contracts beyond 1 July 2018, in accordance with the provisions mentioned above. For clarity, we therefore suggest that the standard is expressed to apply to any SRAS procurement undertaken by AEMO after the publication of the standard, in respect of a period commencing on or after 1 July 2018.