



16 May 2014

Mr John Pierce
Commissioner
Australian Energy Market Commission
PO Box A2499
Sydney South NSW 1235

Submitted online: aemc@aemc.gov.au

Dear Mr Pierce

ERC0168 - System Restart Ancillary Services

Origin Energy (Origin) appreciates the opportunity to provide comments to the Australian Energy Market Commission's (AEMC) System Restart Ancillary Services (SRAS) Consultation Paper. The attached submission discusses the proposed changes to the SRAS framework in the context of the AEMC's assessment criteria set out in the Consultation Paper - i.e. governance; reliability; and efficient pricing and investment outcomes. Our key points are summarised below:

Governance

The governance arrangements under the current SRAS framework has lead to a concentration of the management of the risk of a major supply disruption within a single entity - the Australian Energy Market Operator (AEMO). This is contrary to the AEMC's 2006 SRAS Rule change Determination¹ which established that the governance arrangements should allow for a separation of responsibility. The rationale for this approach was to minimise the risk of a conflict of interest and ensure a balancing of the economic and technical considerations under the SRAS objective, and the efficient meeting of the system restart standard (SRS).

A lack of detail and direction in the Rules, however, has undermined the AEMC's initial intent. In particular the lack of clarity in the Rules has resulted in a disconnect between the SRAS guidelines² (administered by AEMO) and the SRS and SRAS objective more broadly. Origin notes that there has been minimal input from the Reliability Panel (Panel) to AEMO's recent proposed changes to the SRAS guidelines. This has resulted in a disproportionate weighting of the cost of procuring SRAS over other economic, commercial and technical requirements central to achieving the SRAS objective³ and meeting the SRS.

To enhance the governance arrangements, Origin suggests that the Rules are amended so that:

- A requirement is put in place whereby changes to the SRAS guidelines must be approved by the Reliability Panel; and

¹ AEMC 2006, 'System restart ancillary service arrangements and pricing under market suspension Rule change, Final Determination.

² SRAS guidelines are a key determinant in shaping the SRAS framework

³ 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*. NER clause 3.11.4A

- AEMO must consult with, and have regard to, TNSPs and jurisdictional coordinators when amending the SRAS guidelines.

Reliability

AEMO's proposed changes to: the boundaries of the electrical sub-networks, and the quantity of SRAS to be acquired in each region, are untested and could undermine the meeting of the SRS. This is likely to have implications for reliability and the restoration of supply in the event of a system black.

Origin notes that an outcome of the Panel's 2012 SRS Determination was to move from a maximum restoration timeframe to a 'target timeframe'. In our view the imprecise nature of a target timeframe does not provide sufficient assurance that the power system would be restored in a timely manner.

To ensure the meeting of the SRS and timely restoration following a major supply disruption, we suggest that:

- AEMO be required to demonstrate that any proposed changes to the SRAS guidelines will allow for the meeting of the SRS and are aligned with the SRAS objective;
- The definition of a major supply disruption is redefined in the Rules, and is made to include a NEM-wide or multi-region system black event; and
- The restoration timeframe be redefined as an explicit operational standard.

Efficient price and investment outcomes

Origin does not support the view that an increase in the cost of SRAS services is in itself an indication of economic inefficiency as this could be due to a range of factors including the opportunity cost of providing the service, and how it is valued by customers.

To ensure that there are efficient price and invest outcomes, Origin:

- Supports AEMO's proposal that SRAS services are recovered on a regional basis; and
- Is not convinced that the use of the dispute resolution provisions in the Rules is an appropriate means of resolving contractual disputes in the SRAS market. The AEMC would need to ensure that this does not add to the cost and time to finalise contracts which would deter future investment in SRAS, reducing competition.

Should you have any questions or wish to discuss this information further, please contact Ashley Kemp on (02) 9503 5061 or ashley.kemp@originenergy.com.au.

Yours sincerely,



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1. Governance arrangements

The principle of functional separation and the 2006 Determination

The AEMC's 2006 Determination sought to promote the SRAS objective by providing for the functional separation between the entity that determines the SRS (Reliability Panel) and the body responsible for implementation (AEMO). In outlining its rationale for this approach, the AEMC noted that:

The Commission agrees that a body independent of NEMMCO [now AEMO] should be required to set the system restart standard. There is a strong case to separate the determination of standards from the implementation of those standards. Not only are these separate skills, separation of the roles removes the potential for conflict of interest and will give tenderers greater confidence in the tendering process.⁴

Origin agrees with the above sentiment in that functional separation should allow for a balancing of the economic, commercial and technical considerations set out in the SRAS objective. This is likely to facilitate more efficient decision making, and help to minimise the potential for a conflict of interest where any one objective is promoted disproportionately above another.

Decision making in the management of a major supply disruption lies primarily with AEMO

Notwithstanding the original intent of the Rules, there are indications that much of the decision making regarding the management of a major supply disruption is concentrated in a single entity - AEMO. As the procurer of SRAS services, AEMO understandably has an interest in minimising the costs of obtaining these services. This, however, has the potential to create inefficiencies if the goal of minimising the upfront costs of SRAS services is not balanced with other economic and technical considerations set out in the SRAS objective. By fully considering all relevant costs/factors pertaining to a potential major supply disruption the role of a body such as the Reliability Panel is therefore crucial in providing the requisite checks and balances. The AEMC's comments in the 2006 Final Determination indicates that this is in fact the role it had envisioned for Reliability Panel:

In essence, the system restart standard represents the Reliability Panel's analysis of the minimum level of system restart that should be procured to satisfy overall market expectations and efficiently minimise expected economic cost of a major supply disruption.⁵

The above statement suggests that the AEMC was of the view that with the Panel having responsibility for the SRS this would allow for a sufficient level of control over the SRAS framework - in keeping with the principle of functional separation. However, this has not proven to be the case, with a lack of detail and direction in the Rules leading to a disconnect between the SRAS guidelines (which essentially give effect to the SRAS framework) and the SRS/ SRAS objective more broadly.

Under the Rules, AEMO has responsibility for developing the SRAS guidelines. Following a review at the end of last year, AEMO put forward a number of proposed changes to the guidelines that will have a direct impact on whether both the SRS and SRAS objective will be met. Some of these proposals include changes to the boundaries of the electrical sub-networks and the quantity of SRAS to be procured. These issues are discussed in greater

⁴ AEMC 2006, 'System restart ancillary service arrangements and pricing under market suspension Rule change, Final Determination, 2006, Sydney. p.22.

⁵ AEMC 2006 p. 20.

detail later in this submission in the context of what they are likely to mean for reliability. However from a governance perspective, it is our view that given the importance of the SRAS guidelines, (and their impact on the SRS/SRAS objective) any significant changes should be subject to oversight from both AEMO and the Panel. This does not currently occur as decisions around the direction of the guidelines lie primarily with AEMO. Origin does note that AEMO is required to develop the guidelines to ensure alignment with the SRAS objective and the SRS. The lack of detail in the Rules, however, means that they are not sufficient measures in place to ensure that this occurs. Origin therefore suggests that the Rules are amended so that:

- A requirement is put in place whereby changes to the SRAS guidelines must be approved by the Reliability Panel; and
- AEMO must consult with, and have regard to, TNSPs and jurisdictional coordinators when amending the SRAS guidelines.

2. Reliability

The level of reliability should reflect the value that consumers are willing to pay for the frequency and duration of an outage as well as the restoration of supply following a major supply disruption. Restoring supply following a major supply disruption has important economic and technical implications. The longer the restoration timeframe the higher the economic cost of the outage; and an increase in the time to restore supply to station auxiliaries increases the restoration timeframe as thermal units cool and are required to be reheated.

It should also be noted that geographical considerations as well as the load and generation composition of an electrical sub-network are critical determinants impacting the restoration timeframe. The geographic and electrical distance between load centres increases the time to restore supply as technical issues relating to voltage and frequency control makes supply restoration complex and difficult. Multiple high voltage networks within a sub-network also increases the restoration process as different high voltage networks are progressively reconnected. The size of generation and load within an electrical sub-network also increases the risk and time associated with supply restoration.

Proposed changes to SRAS guidelines are untested and could undermine reliability

As mentioned earlier, AEMO is looking to make a number of changes to the SRAS guidelines. Specifically, they have determined that a major supply disruption can be contained within a single electrical sub-network due to natural break points in the network. The possibility of a NEM-wide or multiple region supply disruption has therefore been discounted, with SRAS to be procured for an outage in a single electrical sub-network. This assumption extends to AEMO assuming that there is sufficient supply available to restart the affected electrical sub-network from an adjoining electrical sub-network through interconnectors.

Additionally, AEMO has also determined to reduce the number of electrical sub-networks from ten to six. The main recommendation is the creation of a new sub-network between southern Queensland and northern NSW with the remainder of NSW considered a single sub-network. Victoria has also been reduced from two to a single electrical sub-network.

Origin's concern is that neither of the above proposals has been modelled or tested by AEMO or its consultants DNV KEMA⁶, and is based solely on desktop or a 'cut plane' overview of the NEM. As far as we are aware, DNV KEMA did not consult with TNSPs in providing advice to AEMO on electrical sub-networks in the NEM. This is despite NEMMCO, now AEMO, proposing during the 2006 Rule consultation that "it, with advice from jurisdictional co-ordinators and TNSPs, should determine electrical sub-network boundaries."⁷

It is also not clear if AEMO had consulted with, and had regard to, advice from TNSPs prior to forming a view that a major supply disruption can be confined to a single region, or that the number of electrical sub-networks should be consolidated.

All this raises a number of questions including, whether:

- The body responsible for implementing and procuring SRAS should be determining the basis of a major supply disruption within a guideline it administers; and
- It is prudent to consolidate sub-networks to the size of an individual NEM region, for example 11,060 MW of load in NSW South with multiple high voltage networks without modelling or testing the assumptions.

Both considerations are critical determinants in meeting the SRS as the assumptions regarding electrical sub-networks could increase the time required to restore supply, increasing the economic cost of a major supply disruption. The larger and more complex the sub-network (and load and generation size), the greater the time to resupply station auxiliaries increasing the risk of stations cooling, requiring additional time to be reheated before being able to contribute to supply.

Again, it is our view that greater detail and clarity in the Rules would allow for more efficient outcomes. In addition to our earlier proposed changes pertaining to the governance arrangements, we also suggest that:

- AEMO be required to demonstrate that any proposed changes to the SRAS guidelines will allow for the meeting of the SRS and are aligned with the SRAS objective; and
- The definition of a major supply disruption is redefined in the Rules, and is made to include a NEM-wide or multi-region system black event.

The above additions should help ensure that there is an appropriate trade-off between costs, and maintaining a reliable supply that is line with community expectations.

Appropriate timeframe for restoration

Origin notes that an outcome of the Panel's 2012 SRS Determination was that what was once an operational or maximum timeframe for restoration of the power system has now become a 'target timeframe'. This change was based on advice from AEMO - however again it is not clear if either the Panel or AEMO tested the impact of such a change on the meeting of the SRS and the SRAS objective.

In our view the ambiguous and imprecise nature of a target timeframe does not provide sufficient assurance that the power system would be restored in a timely manner as dictated by the SRAS objective. For this reason Origin suggests that:

⁶ DNV KEMA 2013, 'AEMO responsibilities to procure SRAS - DNV KEMA independent review,' 30 December 2013.

⁷ AEMC 2006. p. 23.

- The restoration timeframe be redefined as an explicit operational standard.

3. *Efficient price and investment outcomes*

Origin notes that AEMO has identified issues around cross subsidisation where SRAS costs in one region have increased above that of other regions. On this basis we support AEMO's proposal for regional cost recovery of SRAS.

In terms of the procurement of SRAS, Origin agrees with the AEMC that price signals drive the efficient use, operation of, and investment in electricity services. AEMO has become concerned, however, that an increase in the price of SRAS is a sign of market failure in that the price may not be reflective of the cost of providing the service. Origin does not support this contention given that an increase in the cost of a service is not in itself an indication of economic inefficiency, and could be due to a range of factors including the opportunity cost of providing the service and how it is valued by customers.

Notwithstanding AEMO's concerns around the price of SRAS, we have doubts as to the appropriateness of their proposal for the use of the dispute resolution provisions in the Rules as an arbitration mechanism, where there are contract disputes. If this results in an increase in the time and cost to finalise contracts it is likely to deter future investment in SRAS, reducing competition.