

Our Ref: 12354549  
Your Ref: ERC0300  
Contact Officer: Chris Ridings  
Contact Phone: 08 8213 3487  
Date: 17 June 2021

Ms Anna Collyer  
Chair - Australian Energy Market Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

Dear Ms Collyer,

### **Efficient management of system strength on the power system – draft determination**

The Australian Energy Regulator (**AER**) welcomes the opportunity to comment on the Australian Energy Market Commission's (**AEMC**) *Efficient management of system strength on the power system* draft determination. This rule change proposal aims to further develop the framework for the planning, provision and coordination of system strength in the National Electricity Market (**NEM**).

We acknowledge the need to further develop the existing system strength frameworks. The 'do no harm' framework has significantly increased the cost and complexity of the generator connections process, resulting in substantial delays to the connection of new generation. Additionally the minimum system strength framework is inherently reactive, and lacks the scope for proactive and coordinated approaches to managing system strength which, if adopted, could lead to more efficient outcomes.

#### *Consideration of procurement options*

We consider that structured procurement will allow for a more coordinated approach to the provision of system strength which will allow the responsible Transmission Network Service Provider (**TNSP**) to implement the most efficient solutions. As part of this approach it will be important for TNSPs to communicate in their annual planning reports any forecast requirements for system strength and plans for procurement. This will allow the opportunity for market participants to offer non-network solutions to meet this need. It is likely that there will be significant investment needed to meet the required system strength levels, so it will be critical to ensure all options are available and assessed to solve the need as efficiently as possible. The regulatory investment test (**RIT-T**) provides a transparent economic assessment to ensure the most efficient solution is implemented.

#### *Efficiency of the system strength standard*

The AEMC states that the intent is for the framework to supply the efficient level of system strength, however we consider this could be better reflected in the draft rule. The system strength obligations in the proposed clause 5.20C.1 require the Australian Energy Market Operator (**AEMO**) to have regard to the minimum three phase fault level, which is required for the operation of network protection equipment. The proposed clause S5.1.14(b) places

the obligation on the TNSP to achieve stable voltage waveforms, which is to be defined by AEMO in clause 5.20.6(f). However the planning framework does not consider the efficiency of how those standards are to be set. As such we consider that to better achieve the policy intent of providing an efficient amount of system strength there should be a requirement for some form of cost benefit analysis to ensure that the cost of meeting the standard does not outweigh the marginal benefits, particularly in the case of voltage waveform instabilities. This obligation could form part of the proposed clause 5.20.6(f)(4) which could detail tolerances against which the reasonable endeavours procurement standard (as in the proposed clause S5.1.14(b)) could be assessed.

*Efficient use of assets*

Synchronous condensers are expected to be widely utilised for providing system strength solutions in the short to medium term. However one issue that could arise is the relatively long lifespan of synchronous condensers leading these to become stranded assets upon the retiring of nearby inverter based resources, which may have a relatively shorter life span. The draft rule proposes that TNSPs publish information regarding the available fault level in their annual planning report. However, we think the AEMC should give additional consideration as to whether this should include an assessment of whether relocation of synchronous condensers from areas of high system strength to areas of low system strength is efficient, or whether existing frameworks already provide an incentive for this.

We thank the AEMC for the opportunity to submit on this process. If you have any questions about our submission, please contact Chris Ridings on 08 8213 3487.

Yours sincerely,

A handwritten signature in blue ink that reads "Jim Cox". The signature is written in a cursive style with a large initial "J" and "C".

Jim Cox  
Deputy Chair  
Australian Energy Regulator