

16 February 2017

Ms Anne Pearson

Chief Executive
Australian Energy Market Commission
PO Box A2449
SYDNEY SOUTH NSW 1235

**Energy Networks Australia submission to AEMC's Draft Determination
*Emergency Frequency Control Schemes (ERC0212)***

Dear Ms Pearson,

Energy Networks Australia welcomes the opportunity to make a submission to the Australian Energy Market Commission (AEMC) in response to the "*Emergency Frequency Control Schemes*" Draft Determination published by the AEMC on 22nd December 2016.

Energy Networks Australia is the national industry association representing the businesses operating Australia's electricity transmission and distribution and gas distribution networks. Member businesses provide energy to virtually every household and business in Australia.

Energy Networks Australia supports the introduction of:

- » an enhanced emergency frequency control scheme (EFCS) governance framework that allows for the efficient use of all available technological solutions to support future power system conditions and which can be delivered at an efficient cost to consumers; and
- » the introduction of a new classification of contingency event, the protected event, which can be managed using a mix of ex-ante solutions as well as load shedding

Through consultation with its member businesses, Energy Networks Australia has a number of concerns and has made suggestions on how the proposed frameworks may be improved to assist in achieving the objectives of the draft Rule for further consideration by the AEMC.

EFCS governance framework

Energy Networks Australia notes that the proposed framework includes a process for determination, design, implementation and monitoring of EFCS with clearly defined roles and responsibilities for each stage of the process. Of particular interest to members is the proposed role of Network Service Providers (NSPs) in informing the development of potential scheme capabilities, including in the estimation of costs, implementation of EFCS schemes and monitoring and reporting on the ongoing efficacy of EFCS.

Identification and development of EFCS proposals

Through their planning and operational processes, NSPs have insight into potential events that might compromise system security and will be aware of local or regional operational issues that need to be considered during the development of both EFCS proposal and design. The AEMC recognised this input and experience in its Draft Determination¹. Energy Networks Australia submits that paragraphs 3.3.3 and 3.3.5 of the Draft Determination be amended to indicate that the development of both the EFCS proposal and EFCS design specification should be carried out by AEMO, *in conjunction* with the NSP.

Energy Networks Australia considers that when developing an EFCS proposal alternatives for mitigating the consequences should also be considered. This may include network augmentation, the use of system constraints and FCAS, or the use of the proposed Inertia and FFR markets. Any additional benefits of these options should also be considered. For example network augmentation through the installation of a synchronous condenser would also provide additional inertia and system strength.

Robust cost benefit analysis

Energy Networks Australia is concerned that the draft EFCS framework does not adequately allow for the assessment of costs at a suitable level or at an appropriate stage of the process and that this may impact on the Reliability Panel's assessment of the EFCS proposal. As drafted, Energy Networks Australia is concerned that cost estimates for delivering the range of proposed scheme capabilities are likely to be based on assumptions that could materially change following the development of the EFCS design specification. Typically the design specification will provide more detail regarding technical implementation requirements that impact on costs.

Energy Networks Australia submits that this risk could be mitigated if the EFCS design specification is developed at the initial stage of the process to better inform NSP cost estimates. This would also allow the Reliability Panel to consider the overall cost benefit of the EFCS proposal to develop an EFCS standard. It is considered that this approach would provide a more robust cost benefit process.

EFCS Implementation

Energy Networks Australia notes that the draft Rule proposes differing responsibilities for NSP's with respect to the implementation of under-frequency schemes and over-frequency schemes. For under-frequency schemes, the draft Rule proposes that NSPs must install equipment and or change equipment settings as required and in accordance

¹ For example, Draft Determination, p35.

with EFCS design specifications. For over-frequency schemes, NSPs have an obligation to engage with generators and offer generators the option of building assets or changing settings on existing assets to comply with EFCS design specifications. However if a generator declines the request or good faith negotiations do not result in an agreement being reached, the Draft Determination suggests that NSPs are ultimately responsible for ensuring the over-frequency scheme has been implemented in accordance with design specifications.

While Energy Networks Australia is generally supportive of the introduction of an over frequency scheme for generator shedding, NSPs should not be responsible or liable for any actions associated with the implementation of over-frequency control schemes that they cannot control. To give effect to this, Energy Networks Australia submits that clause 4.3.4 and S5.1.10.1a(c)(4) of the draft Rule should be amended to clearly provide that NSPs are only responsible for the part of the scheme's performance for which they have direct control, for example, the conceptual design of the scheme or the settings.

Further, ENA notes there appears to be various NSP obligations referenced under draft Rule clauses 4.3.4(ba), read in conjunction with S5.1.10a of schedule 5.1, that relate to implementation of EFCS for which civil penalties may apply. ENA considers that these references should also be consistent with accountability for actions within an NSPs' control.

Energy Networks Australia also recommends that the final determination provide an obligation on all new generators above a nominated rating, to install an over frequency generator shedding scheme. This may reduce the burden on existing market participants who may otherwise be required to participate in generator shedding. Implementation of a suitable scheme will generally be simpler than retrofitting an appropriate scheme to an existing generator.

Timeframes Implementation of an EFCS

When it has been determined that an EFCS is appropriate, the time to approve, design, procure specialised equipment, install, test and commission the scheme could be significant. Estimates of the number of EFCS schemes that AEMO is likely to expect each NSP to commission in coming years, would assist NSPs in programming their work and ensuring adequate resources are available.

Furthermore, the final determination should allow for AEMO to implement a temporary arrangement where the likelihood and consequence of an event is significant. For example, where it is determined that the consequence of a protected event will be mitigated by a combination of ex-ante measures and a UFLS scheme; AEMO may implement a temporary strategy that involves only ex-ante measures, whilst the NSP is designing and installing the EFCS.

Monitoring and reporting

The AEMC's proposed EFCS framework requires NSPs to develop and administer testing arrangements that comply with the EFCS design specification and requires periodic reporting to AEMO on the matters defined by the EFCS implementation procedures.

Overall, Energy Networks Australia is supportive of regulatory mechanisms that support the efficient operation and efficacy of the EFCS, including through monitoring and reporting. However, Energy Networks Australia submits that monitoring and reporting of EFCS implementation compliance can be adequately captured through existing, well established and effective compliance regimes managed by the AER. The proposed introduction of a new monitoring and reporting regime would not only appear to be duplicative, but unnecessary. If there are concerns about the self-compliance regime in the NER then the AEMC/AEMO need to propose a solution to that issue rather than introducing a duplicative regime.

Protected events governance framework

Energy Networks Australia supports the introduction of a new category of contingency event, a protected event; to allow AEMO to manage the system at all times to limit the consequences of plausible, high consequence events. The draft Rule proposes a governance framework to assess protected events and to determine what costs should be incurred to limit their consequences. In brief, the governance framework involves the assessment of protected events, a determination of post contingent operating state and implementation of the measures to achieve the post contingency operating state, should the event occur.

Under the draft Rule, it is proposed that AEMO have responsibility for deciding whether a non-credible contingency event will be classified as a protected event and the Reliability Panel has responsibility for determining a post-contingency operating state for the protected event following AEMO's assessment.

Energy Networks Australia suggests that it would be more appropriate for AEMO to propose to the Reliability Panel that a non-credible event be classified as a protected event. The Reliability Panel can then make a determination on a protected event and the appropriate post-contingent operating state. Energy Networks Australia considers the Reliability Panel is the appropriate body to make these determinations and better aligns with its existing functions and authority, as identified by the AEMC in relation to the system restart standard or frequency operation standards².

² Draft Rule Determination, p50.

Cost Recovery and Transitional provisions

Energy Networks Australia notes that the draft Rule proposes new obligations on NSPs that will require NSPs to incur additional costs including, for example, in relation to the design, construction and ongoing maintenance of certain investments to allow operation of the EFCS. The AEMC's Draft Determination also provides³ that these additional obligations be prescribed transmission services and hence recoverable under the regulatory determination process in the Rules.

For TNSPs that have already lodged their Revenue Proposal with the AER or whose regulatory period has already commenced, Energy Networks Australia considers that transitional provisions should form part of the AEMC's final Rule which will allow these new costs to be automatically passed through as opposed to activation via pass through provisions in the Rules. Energy Networks Australia submits that this approach would allow relevant TNSPs to recover costs borne out of this Rule change which could not be considered and proposed as part of their regulatory determination processes.

Other considerations

Clause 4.3.5 of the current National Electricity Rules (Market Customer obligations) indicates that market customers having expected peak demands at connection points in excess of 10 MW, must provide a minimum of 60% of their expected demand as an automatic interruptible load. Energy Networks Australia notes that the current drafting of the rule may result in customers with large loads over multiple sites interpreting their obligation to allow them to only provide 60% of their total load (possibly all at one site) as an automatic interruptible load.

Energy Networks Australia submits that this rule is relevant to general reform of emergency frequency control and therefore suggests that clause 4.3.5 be updated to clarify that the rule applies at **each** connection point in excess of 10 MW.

Please don't hesitate to contact Peter Cole, Director, Future Networks or myself on (02) 6272 1511, if you would like to discuss any aspect of the attached submission.

Yours sincerely,



John Bradley
Chief Executive Officer

³ Draft Rule Determination, p37.