ElectraNet

8 August 2017

John Pierce
Chair
Australian Energy Market Commission
Level 6, 201 Elizabeth Street
SYDNEY NSW 2000

Via email:

Dear John,

re: Draft System Security Rule changes - Project ERC211 and Project ERC 214

Introduction

This submission provides ElectraNet's consolidated responses to the Australian Energy Market Commission's (AEMC's) call for submissions on draft Rule changes in relation to Managing Power System Fault Levels (ERC211) and Managing the Rate of Change of Power System Frequency (ERC214).

We are presenting a consolidated submission in relation to the two draft Rules as many of the issues we wish to comment on are common to both.

Summary

ElectraNet agrees that there is a need for immediate change to address the impact of changing generation technology on the security of supply in the National Electricity Market (NEM).

Our submission assumes the broad allocation of roles and responsibilities presented by the AEMC in respect of both draft Rules. However, given the acute market pressures in South Australia, we cannot emphasise enough our concern to ensure that the new Rules provide a workable set of arrangements that deliver efficient outcomes for consumers and allow Transmission Network Service Providers (TNSPs) to adequately manage their risks and obligations under the new framework in an extremely challenging market environment.

Of critical importance in particular is the need to:

- Provide adequate competitive protections, checks and balances under the Rules when TNSPs procure system strength and inertia services;

- Address the material cost recovery and cash flow issues under the Rules to avoid exposing TNSPs to unmanageable risk; and

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- Adopt adequate transition arrangements and timeframes given the required lead times involved, including the Regulatory Investment Test for Transmission (RIT-T) process (or preferably expedited economic assessment processes) with a more logical commencement date for the new services of 1 July 2019.

ElectraNet considers there are a number of material gaps in the proposed arrangements that should be addressed in particular around the requirements applying to TNSPs seeking to contract services in the short term.

Accordingly, the primary focus of our submission is on the implementation of responsibilities allocated to TNSPs, in particular the increased role of contracting. ElectraNet is also party to a submission being developed by Energy Networks Australia that will address the separate aspects of the draft Rules, including processes for the connection of new generation.

ElectraNet is also aware the detail of technical specifications to manage system strength, and therefore the services that may need to be contracted, are still evolving and are likely to require revisions from that assumed in the draft Rule for management of power system fault levels. ElectraNet is also conscious that there is some urgency to address system security matters.

However, it appears that existing measures in the Rules may be sufficiently workable to manage short term risks and allow a short delay to the time to finalise the details for the longer term. ElectraNet would therefore support a short extension to the date for the making of the final Rules to adequately address all the relevant issues.

A summary of the matters we address in the body of the submission is presented in the table below.

Table 1 Summary of position on key issues in relation to each draft Rule change

Issue	Managing Power System Fault levels	Managing Rate of Change of Frequency (RoCoF)
Technical specification	ElectraNet concurs with the emerging industry technical view that **Short Circuit Ratio (SCR) is not the most useful metric or specification with which to manage System Strength**. We understand AEMO will provide detailed advice in this regard broadly to express requirements in terms of absolute fault levels at key nodes and to rely on the 'do no harm' principle embedded in existing arrangements for new connections.	Inertia is a satisfactory means to specify the requirement.
TNSP contracting activities Protection against uncompetitive market environment	Accept the primary mechanism in the future to manage system strength (however specified – also see Technical Specification) is for TNSPs to manage via connection agreements and standards. ElectraNet sees flaws in the current draft proposals where TNSPs would be required to contract in the absence of sufficient competitive contracting protections. Under cl 3.11.5 AEMO may (as now) conduct an NSCAS tender process which involves significant competitive protections and good faith negotiation requirements. **ElectraNet does not accept proposed arrangements in the draft Rules whereby TNSPs have inadequate protections to guide reasonable price outcomes and leave TNSPs unable to manage uncompetitive contracting situations in**	Accept that AEMO is to determine sub-region inertia requirements. Accept TNSPs to source response, contracting where necessary. **ElectraNet does not accept proposed arrangements in the draft Rules whereby TNSPs have inadequate protections to guide reasonable price outcomes and leave TNSPs unable to manage uncompetitive contracting situations in contrast to AEMO's ability to apply NER cl 3.11.5, and to exercise power of direction where necessary.**

Issue	Managing Power System Fault levels	Managing Rate of Change of Frequency (RoCoF)
	contrast to AEMO's ability to apply NER cl 3.11.5, and to exercise power of direction where necessary.	
TNSP cash flow	**An equivalent provision to allow for the cost of services to satisfy system strength requirements to be recoverable through network support payments is required** to that proposed for cl 5.20B.4 (h) in relation to inertia services. Where an AEMO declaration initiates contracting for system strength services by a TNSP, recovery of costs as a network support arrangement is likely to be very delayed. In addition, the new services are clearly not anticipated by TNSPs in the network support allowances in place for current regulatory periods. **This material cash flow risk needs to be addressed through appropriate mechanisms.**	The AEMC proposes new cl 5.20B.4 (h) to specifically include payments for inertia service in matters TNSPs can recover through network support payments under Ch 6A. Where an AEMO declaration initiates contracting for inertia services by a TNSP, recovery of costs as a network support arrangement is likely to be very delayed. In addition, the new services are clearly not anticipated by TNSPs in the network support allowances in place for current regulatory periods. **This material cash flow risk needs to be addressed through appropriate mechanisms**.
Clarity of requirements where TNSP is to contract. Plus need for formal endorsement of TNSP proposed responses	Compliance and reputational risks for service delivery will rest with TNSPs, but TNSPs are acting on AEMO advice. **AEMO requirements should be definitive and TNSP proposed service response formally accepted by AEMO.** Where TNSPs contract on the basis of requirements determined by AEMO, AEMO has an obligation to use reasonable endeavours but TNSPs have an unqualified obligation to meet the need. It is highly unlikely generators will offer 100% performance guarantee accordingly the **TNSP obligation should be expressed on a reasonable endeavours basis.**	Compliance and reputational risks for service delivery will rest with TNSPs, but TNSPs are acting on AEMO advice. **AEMO requirements should be definitive and TNSP proposed service response formally accepted by AEMO.** Where TNSPs contract on the basis of requirements determined by AEMO, AEMO has an obligation to use reasonable endeavours but TNSPs have an unqualified obligation to meet the need. It is highly unlikely generators will offer 100% performance guarantee accordingly the **TNSP obligation should be expressed on a reasonable endeavours basis.**
Commercial Incentives for non-network solutions	The proposals do not address the existing shortcomings under the Rules - i.e. there remains **no commercial incentive** based on a risk-weighted return to pursue non-network solutions.	The proposals do not address the existing shortcomings under the Rules - i.e. there remains **no commercial incentive** based on a risk-weighted return to pursue non-network solutions.
Enablement of contracted services	It should be clarified that **AEMO should make all unit commitment and dispatch decisions for contracted scheduled units on the basis of costs advised by TNSPs**.	ElectraNet does not accept draft Rule (cl 4.4.4 (c) whereby AEMO will select units to provide services based on priority order nominated by relevant TNSP. The draft Rules should be amended to make it clear **AEMO should make all unit commitment and dispatch decisions for contracted scheduled units on the basis of costs advised by TNSPs.**
Evaluation process	**An equivalent and streamlined economic assessment process should apply to both contracting and network investment options**.	**An equivalent and streamlined economic assessment process should apply to both contracting and network investment options**.
Implementation timeframes	Adequate time needs to be allowed for implementation of the new framework, assessment processes and delivery of solutions with a **more realistic start date of 1 July 2019.** Existing processes in the Rules should be relied upon in the interim.	Adequate time needs to be allowed for implementation of the new framework, assessment processes and delivery of solutions with a **more realistic start date of 1 July 2019.** Existing processes in the Rules should be relied upon in the interim.

The remainder of this submission addresses these issues in further detail as follows.

Technical specification for system strength

As a key point of principle, requirements for system security services such as system strength and inertia should be defined and specified in a manner which is simple, transparent and able to be readily measured, delivered and monitored by the responsible parties.

ElectraNet submits that management of system strength through specification of Short Circuit Ratio (SCR) should not be continued. ElectraNet concurs with the emerging view of the Australian Energy Market Operator (AEMO) and other TNSPs that SCR at individual generator connection points is not the most appropriate metric to measure or manage system strength across the network. We are aware AEMO is actively developing a preferred view which at the time of writing was based on specification of fault level at selected nodal points in a transmission network as a more appropriate approach.

ElectraNet considers that the AEMC should continue to work closely with AEMO and the industry to settle on a preferred technical specification before enshrining a particular metric in the Rules, with the detail addressed through an AEMO guideline under the Rules. ElectraNet anticipates system strength will need to be expressed and measured through a number of metrics which broadly will:

- ensure satisfactory system operation, for example of network protection facilities and limits on propagation of voltage swings that threaten the performance of other generators; and

- satisfactory performance of individual generators and loads such that individual generators will remain stable in the presence of specified system conditions (e.g. voltage swings).

This structure is similar to the existing negotiated access regime concept where AEMO and TNSPs undertake detailed studies assessing a range of performance measures and suggests that the Rules may express the broad principles and AEMO guidelines detail the nature of studies needed but not specify a simple single pass/fail metric.

Protection for competitive outcome

The draft Rule to manage the rate of change of power system frequency (RoCoF) creates a new requirement for TNSPs to ensure a minimum level of inertia is present at all times in each of sub-regions within each TNSP's network as defined by AEMO. The draft Rule also creates a new class of support service – inertia network service. Inertia network services may be contracted by TNSPs if required to meet the obligation for a minimum level of inertia, although changes to connection and access arrangements will also come into play for the future as the first line of management of RoCoF.

The draft Rule to manage system strength creates a new requirement for TNSPs to maintain a level of system strength above minimum levels within each TNSP's network as defined by AEMO, expressed in terms of SCR, as discussed above. A new arrangement to establish requirements for connection will affect future SCRs which are otherwise expected to fall to levels where security would be threatened due to changing technology.

From our working level interaction with AEMO we understand that a full appreciation of the technical nature of that impact on system security, in particular in relation to the use of short circuit ratios, is still evolving – as noted above[1].

[1] The expanded provisions relating to SCR also increase the potential for AEMO to declare an NSCAS gap under existing cl 3.11.3. Such a notification requires that TNSPs must respond within 30 days indicating whether they will respond to the gap and how.

Our expectation is that in the circumstances where TNSPs are expected to contract, especially when a gap has been notified by AEMO, generally there will be very few parties with whom ElectraNet can contract. We note also that the original proposal from the SA government in relation to inertia proposed extending the definition of security and therefore making AEMO accountable for the contracting stage.

Clause 3.11.5 of the National Electricity Rules (NER) includes a mechanism to protect against situations where AEMO is contracting and there is limited competition. The protection against inadequate levels of competition afforded by these NSCAS provisions was lost in moving accountability to TNSPs. Accordingly, ElectraNet considers that the draft Rules lack protection for competitive pricing and create a significant risk that costs which will be passed through to customers through network prices will not be efficient.

The protections afforded for AEMO procurement processes under Clause 3.11.5 include:

- a requirement for tenderers to negotiate in good faith;
- a competitiveness test, based on the number of conforming tenders received;
- a requirement for tenderers to negotiate in good faith to agree reasonable terms and conditions in the event a tender process is deemed not competitive, linked to specified objectives; and
- in the absence of agreement on terms and conditions within a specified timeframe, provision for the matter to be referred to an Adviser under the dispute resolution processes of the Rules.

Such arrangements are needed to safeguard outcomes for electricity consumers by providing essential protections for the TNSP in a procurement role in the event that there is a lack of competitive provision of such services within its service area. This is one of the key risks noted by the AEMC in allocating primary responsibility to TNSPs rather than reliance on a competitive market for such services.

We also note the AEMC has placed significant weight on the role of the regulatory process and oversight by AER. For example, in section 4.1.1 of the draft determination in relation to managing power system frequency, the AEMC discusses the protection afforded by the regulatory regime in which TNSPs operate.

ElectraNet notes that this regime supervises TNSPs, not tender respondents, as the NSCAS provisions applying to AEMO currently do. Although the provisions will put pressure on TNSPs in relation to the price they accept from tenderers and will oversight situations where TNSPs invest themselves, when they are contact counterparties TNSPs will often be in a sellers' market situation with only few tenders to choose from but little real-world alternative to acceptance.

In this situation TNSPs will face the risk that the AER may subsequently, with the benefit of hindsight, take a different view of whether the price paid by a TNSP was prudent. Where AEMO contracts for the same service it has recourse to the provisions of cl 3.11.5 and is not subject to similar review.

ElectraNet considers it will be facing imbalanced and unnecessary commercial risks as well as being constrained from protecting the interests of end consumers in the face of supplier market power. This is an immediate issue, noting the extremely limited number of parties currently in a position to provide these services from synchronous plant in the South Australian region.

Accordingly, ElectraNet considers that if TNSPs are to be allocated responsibility for tendering:

- they should be able to access protection against uncompetitive market responses, for example access to similar provisions to cl 3.11.5 as noted above;
- AEMO should clearly define a price-volume threshold for the amount of service to be acquired, based on defined criteria;
- AEMO should formally confirm that proposed provision of services/capabilities meet the need specified by AEMO; and
- the procurement role should pass back to AEMO if the threshold is exceeded in order for it to contract, or if necessary, resort to exercise its powers of intervention.

These arrangements could be assisted by including a statement of principle in the draft Rules which requires that AEMO have regard to a cost / risk trade-off in the level of services ultimately procured based on clear guiding criteria, to avoid a situation where the required quantities must be recruited at all costs, potentially exposing customers to open ended risks.

Impact on energy market

The draft determination for managing power system frequency notes that the AEMC proposes further work in relation to contracting for levels of inertia above the minimum needed to ensure system security where additional inertia may allow for increased market benefits. As a result, initial activity will focus on the minimum level of inertia.

A closely related question is dispatch of generating units contracted for inertia service (to meet minimum inertia requirements) above the minimum loading level needed to keep the units on-line which will deliver market benefit in dispatch.

We note that the draft amendments add a new sub clause 3.9.7 (c) which operates in the event of energy dispatched from plant on-line under an inertia service contract is dispatched above minimum output. In practice, this will mean that the dispatch price will be suppressed by the presence of generation at the minimum output as output up to the level of minimum generation cannot set price (under existing Rules).

However, the draft Rule implies a contracted generator may offer capacity above its minimum output and, if dispatched, potentially set price. This is likely to create significant difficulty in pricing of contracts as it will de-risk that generator's operation in the market if the unit is called on under an inertia contract which presumably will compensate it for the decision to commit but offer it the opportunity to earn additional revenue.

This situation will also be material in that AEMO has recently noted the need for a significant amount of capacity and number of units to be synchronised for system security purposes, and therefore the number of units operating at minimum output will dominate the market in South Australia. It will also displace significant amounts of wind generation at times of high wind output impacting the position of renewable resources and the renewable certificate market.

Operation of the contracts will also interact with the operation of spot markets for energy and ancillary services in that commitment of contracted generators often will need to be done in pre-dispatch timeframe.

A basic tenet of the NEM design to date is that AEMO does not instruct unit commitment, only dispatch. Any decisions about unit commitment for inertia or system strength will unavoidably interact with rebidding activity by market participants in the predispatch timeframe which is where

NEM participants achieve price discovery and the opportunity to amend or adjust unit commitment.

Neither AEMO nor TNSPs will know if there is a need for it to call for the commitment of a generator under contract until predispatch has been reviewed based on commitment intentions of market participants. If after reviewing the predispatch it is determined there is a need for additional unit commitment this would be included in a subsequent predispatch with the unit operating at minimum stable load which generally will result in a reduction in forecast market price.

This reduction may then prompt another generator to reduce its commitment on (valid) commercial grounds, leading to a further round of rebidding. Although rebidding to settle unit commitment is a normal part of the NEM, AEMO or a TNSP will be active participants in this process under amended Rules, in conflict with the underlying principle of neutrality.

An important question for operation of the energy market is therefore whether AEMO or TNSPs are best equipped to make the decision about unit commitment. There may be no alternative to making this decision where additional unit commitment is needed to ensure security, but it is a recent development and not foreseen in development of the associated market Rules.

We note proposed cl 4.4.4 (c) instructs AEMO to deploy contracted inertia service providers in the priority order specified by TNSP to the extent reasonably practicable. ElectraNet considers this is inappropriate as it requires TNSPs to make advance (blind) decisions about the order of commitment. The decision about priority of use is an economic choice that can only be made economically with knowledge of the circumstances of the day and should be made by AEMO. TNSPs should provide AEMO with all relevant information about costs, quantities and relevant service parameters, but the decisions about unit commitment and dispatch should be for AEMO.

ElectraNet appreciates that the proposed arrangement for TNSPs to nominate a priority order means TNSPs have some control over the use of the assets they have contracted and will pay for. However, to fully exercise this control TNSPs would need to be actively engaged in the day to day pre-dispatch process and have the ability to amend the priority order in that time frame.

An arrangement of this form implies TNSPs are to have a stake in the commercial outcomes of the energy and ancillary service markets alongside active market participants. ElectraNet submits TNSPs should not be expected to play this role, which is a fundamental departure from the key design principles of the wholesale market.

ElectraNet considers that, while it is appropriate for TNSPs to undertake the contracting role and in the longer term optimise connections in order to facilitate the capability to manage system security, the existing boundary between planning and operation should be maintained.

That boundary sees TNSPs acquire the services provided by assets (in their own right or under contract) by forecasting future dispatch and patterns of customer load but that real time operation of those assets should remain with AEMO on the basis of sufficient information for AEMO to integrate operation with the energy and ancillary service markets. To do otherwise risks incurring higher costs across the sum of TNSP, energy market and ancillary service markets to the detriment of consumers.

Irrespective of whether TNSPs influence unit commitment and dispatch through a priority order or provide AEMO with all necessary information to allow AEMO to make all operational decisions, TNSPs costs for contracts (for amounts AEMO has determined) should be fully recompensed, and there should be no opportunity for these costs to be revisited and reviewed by the AER.

To address these issues, ElectraNet considers it should be clarified that full responsibility for the operationalisation of the inertia and system strength services required to be delivered by the relevant TNSP should rightly rest with AEMO as the market operator, including:

- commitment of generation units with the relevant lead times to deliver the required system strength and inertia services;
- dispatch of the required quantities of the system strength and inertia services;
- management of system strength and inertia services balanced against impacts on the energy and ancillary service markets, recognising the relevant trade-offs between each; and
- management of the associated constraints to ensure secure and stable power system operation.

These clarifications are complementary to existing roles, should be relatively straightforward to achieve, and are consistent with the intent of the overall framework proposed.

TNSP governance and accountability

The draft Rules create regulatory, commercial and reputational risks for TNSPs in a manner that unnecessarily exposes TNSPs and ultimately transmission customers. The Rules need to more clearly define the roles and responsibilities of AEMO vis a vis TNSPs and hold TNSPs accountable to no more than the standard required of AEMO.

The draft Rule to manage rate of change of power system frequency introduces a significant reduction in independence of TNSPs relative to AEMO. This change creates regulatory, commercial and reputational risk for TNSPs and occurs because TNSPs will be responding to AEMO analyses of the need for inertia within sub regions and for system strength remediation.

This situation is in contrast to other areas of the Rules where TNSPs must undertake assessments of their network and meet performance standards specified in the NER or where AEMO and TNSPs collaborate and reach agreement as part of access arrangements. In this regard, provisions for NSCAS Gap notices and existing last resort planning powers for network augmentation that are available to AEMO are back-stops to normal processes. However, the draft Rule introduces AEMO notifications as part of normal processes. In this sense TNSPs will be required to act as the implementers of AEMO analyses.

The requirements for AEMO to determine sub region boundaries and whether a shortfall of inertia will occur requires that it make assessments based on its reasonable opinion in a number of respects – see proposed amendments to cl 5.20B of the NER.

Put another way, AEMO will be asked to make trade-offs about the risk that there will be inadequate inertia to avoid widespread shutdown. Presumably the aim is for the outcome to be a low probability of circumstances where inertia falls short of the minimum needed to ensure a sub region (in practice a sub region may in fact be an entire region or state) avoids widespread shutdown or system black. That is, the new requirements aim to reduce, but not remove, the probability of widespread interruption of supply.

In this respect, we note the principles for determining sub regions (discussed in section 3.4 of the draft determination) set the minimum level of inertia as the amount needed to ensure security which is a similar approach to how the amount of Frequency Control Ancillary Services are determined. However, the guidelines relating to the definition of sub regions are broad. This means AEMO will need to exercise judgement about how it chooses the boundaries and hence the level of risk for different parts of the network.

TNSPs are to be the contracting agent for the location and for the amount determined by AEMO. TNSPs are therefore being asked to bear considerable responsibility and risk, with an expectation the contracts they enter into are prudent and responsible both commercially and technically.

This situation also exposes TNSPs to a compliance risk they cannot readily manage in the event any contracted parties fail to perform and this is associated with a wide-spread interruption. The question will be whether TNSP's contracted amounts were sufficient or adequately specified performance requirements.

In particular cl 5.20B.3 requires AEMO to use reasonable endeavours to identify the levels of inertia service need but cl 5.20B.4 mandates TNSPs to provide that level without qualification. It is unrealistic to expect TNSPs will be able to contract with a guarantee of performance of contracted generators – as generators will simply not enter a contract with a guarantee of this nature.

Accordingly, to avoid creating unlimited and unmanageable obligations, ElectraNet considers that the obligation in draft cl 5.20B.4 should be amended to require TNSPs to use reasonable endeavours in delivering the service, in conjunction with a specific requirement for AEMO acceptance that the response proposed by TNSPs is seen by AEMO as a full and sufficient response to the service obligation it has determined, as discussed above.

In summary, it is in the interests of delivering the most efficient outcomes for consumers, TNSPs and the market as a whole that where TNSPs are responding to AEMO's identification of need that:

- AEMO's statement of quantity of need must be clear, definitive and specific and determined in consultation with the affected TNSP;
- TNSPs should be required to exercise reasonable endeavors in delivering the required service quantities (consistent with the nature of the obligations of AEMO); and
- AEMO should be required to formally agree that a TNSP's proposed response will meet the need determined by AEMO (as discussed above).

As separately discussed above, these obligations would operate within a framework of clear competitive protections under the Rules and a provision to revert to AEMO procurement and / or direction as a fall-back option if a viable commercial outcome cannot be achieved.

Cash flow risks

The determination to manage the rate of change of frequency adds the inertia service to the list of matters TNSPs may include in recovery of network support payments under chapter 6A (draft cl 5.20B.4). However, there appears to be no equivalent for system strength services. ElectraNet considers that contracts relating to system strength should be treated similarly for cost recovery purposes, which should be addressed in the drafting.

In terms of timing, recovery of service payments as network support costs operates under the Rules with a significant delay (effectively 2 years) exposing the TNSP to significant cash flow risk during this period. This is particularly the case where no specific network support allowance is in place for these new services under existing Revenue Determinations, and the specifics of the necessary commercial details at this point in time are inherently uncertain.

By way of illustration, ElectraNet currently has in place a network support arrangement with a single local generator to provide reliability support at the Port Lincoln connection point through back up supply for a peak demand of approximately 35 MW, at an annual cost of approximately $9m. Given that an inertia shortfall requirement if declared by AEMO under the draft Rule would require ElectraNet to secure the full inertia requirement in South Australia, likely involving multiple generating units, it would be expected that the annual cost could be several multiples of this figure. An equivalent situation applies to any declared shortfall of system strength services.

This risk needs to be addressed through an appropriate mechanism. This could include for example,

a transitional provision allowing forecast costs to be passed through on a prospective basis, for example linked to one of the existing cost pass through provisions under the Rules for TNSPs (covering service standard events and regulatory change events).

This cash flow risk exists not only in the short term, but also for contracting activity in the future where TNSPs are to act in response to an unanticipated need identified by AEMO.

While the extent of this risk may be moderated to an extent by the measures discussed above (including competitive protections for TNSPs in contracting, requiring AEMO to 'close the loop' by affirming TNSPs have met the need identified by AEMO and provision for procurement processes to revert to AEMO if non-competitive) even with all such protections in place a material increase in risk remains.

TNSPs should be entitled to full and timely pass through of those costs to be efficiently incurred in meeting the new service obligations, consistent with the revenue and pricing principles under the National Electricity Law. To this end, it is submitted that:

- The AEMC should confirm that contract service payments for both system strength and inertia should fully qualify for cost recovery as network support pass through;

- The material cash flow risks of unfunded network support payments for up to 2 years at a time should be addressed through appropriate mechanisms, such as the provision to seek pass through of forecast costs (for example linked to one of the existing cost pass through provisions under the Rules) or other appropriate revenue and pricing adjustment.

Incentives

ElectraNet has consistently stated that the current regulatory framework provides no positive incentive for TNSPs to procure non-network solutions which deliver no commercial upside and bring considerable potential downside (through cost recovery risk, cash flow risk, contractual risk and compliance risk). The lack of a risk weighted return for delivery of such services as an operating expenditure cost pass through and management of the associated risks is unchanged by the draft Rules.

It is submitted more broadly that the AEMC should develop and progress prudent and timely reforms to the economic regulatory framework to address this existing and rapidly growing issue, noting the AEMC's intention to review financial incentives for network businesses.[2]

Timeframes

Response to service shortfalls

The draft Rule for managing RoCoF provides for AEMO to notify of a shortfall to be addressed in no less than 12 months in the future. ElectraNet appreciates that it will be important for a timely response but notes that in the event AEMO specifies the minimum 12 month response time this will bias the response to third party contracts away from TNSP capital investment even when this option may be the most efficient outcome. This will occur as third-party contract costs are to be recoverable as "inertia support payments" that will not be subject to the RIT-T, but capex expenditure by TNSPs must be subject to a RIT-T under the draft Rule.

This situation risks inefficient outcomes as the procedures for conducting a RIT-T are lengthy and it

[2] This review is expected to examine the relative incentives between capital and operating expenditure, particularly those which influence network services providers to pursue network versus non-network solutions, as noted in the AEMC Annual Monitoring of Electricity Network Regulation report, 18 July 2017.

is unlikely a RIT-T (and subsequent dispute processes) could be completed in 12 months, much less the associated asset constructed. The situation prejudices technology neutrality and also risks higher costs being passed through to consumers if it has the effect of deferring any network investment solution that may be more efficient by at least 12 months relative to contracting solutions.

ElectraNet considers that each alternative should be subjected to a similar level of economic evaluation in the delivery of both inertia and system strength services to support consistency, transparency and efficiency. ElectraNet also recognises the need for timely responses to system security needs, and agrees with the need for a streamlined economic assessment path, which may not be possible under a full RIT-T process.

These challenges could be addressed by:

- requiring an equivalent economic assessment process to be undertaken for both contracting solutions and network investment solutions for inertia and system strength services;
- exempting system strength and inertia requirements from the application of the full RIT-T process[3], or alternatively reducing the steps for a RIT-T in response to an AEMO statement of need or declared gap so that it is practically achievable within 12 months; and
- in the case of an inertia requirement, lengthening the minimum time for a response to a notice from AEMO to allow for the most efficient solution to be delivered following completion of the appropriate economic assessment process.

Care also needs to be taken to strike the correct balance between allowing flexibility for AEMO to respond to changing circumstances, and the need for ongoing requirements to be sufficiently stable to enable more efficient longer-term solutions to be developed and implemented.

More broadly, the commencement dates for the new obligations proposed need to align with implementation timeframes that are achievable and deliverable.

This includes allowing sufficient time for the development of relevant guidelines, modelling and analysis to specify detailed requirements and identify any shortfalls, appropriate and measured economic assessment processes as outlined above, and sufficient lead times for required procurement and / or project delivery processes to implement the identified solution.

This suggests that a delivery date of 1 July 2018 is unlikely to be achievable under the proposed Rules, and a more realistic and achievable date would be 1 July 2019.

As noted above, existing arrangements under the current Rules for the identification and procurement of NSCAS services provides a transitional solution in the interim. For the avoidance of doubt, the drafting of the proposed Rules could be carefully reviewed to ensure this is the case in relation to the inertia and system strength requirements.

Rule change timetable

There are two reasons for urgency in progressing Rule changes for system security:

- to ensure inertia and system strength in the short term, which in practice can only come from existing facilities; and
- to equip NSPs to respond to current applicants for connection.

[3] One option would be to expand the definition of 'urgent and unforeseen' requirements for the purposes of the RIT-T to include system strength or inertia shortfalls declared by AEMO, and / or to extend the current timeframe for such exemption from 6 months to 12 months, given that 12 months this is the minimum practical timeframe for application of the RIT-T in any event.

ElectraNet considers that existing mechanisms such as NSCAS contracting by AEMO and operating constraints are capable of handling the immediate risks, but work to date is demonstrating that robust longer-term solutions will need more time than is currently available.

As noted above, ElectraNet would therefore support deferring the timeframe for making these major Rule changes to allow sufficient time for the technical, commercial and regulatory implications noted in this submission to be adequately addressed.

Roles & responsibility model

Table 2 summarises ElectraNet's view on the most effective allocation of responsibilities for managing System Security and Rate of Change of Frequency compared with the current proposals reflected in the draft determinations (with key points of difference in **bold**).

Table 2 Preferred approach to the implementation of inertia and system strength services

Key Roles	AEMO	TNSP
Identifying the need	Adequacy of system strength for power system stability – **wholly** AEMO responsibility (in consultation with TNSP) to identify and specify in detail Including potential sub region islands Inertia - **wholly** AEMO responsibility (in consultation with TNSP) to identify and specify in detail	Voltage control (status quo) Protection equipment operation (status quo)
Investment Decision Making & Delivery	**AEMO to approve the final solution to be delivered by the TNSP, including quantities and pricing.** **Clear criteria and process for TNSP procurement process to revert to AEMO tendering process and / or direction in the event of non-competitive outcomes under defined criteria.**	TNSP responsible for delivery based on system strength and inertia requirements specified by AEMO, including: • Options analysis • Procurement of solution (including contracting, where required) • Funding of solution **Full contracting protections and processes to apply to TNSPs as currently applied to AEMO (NER 3.11.5).**
Operation	Operationalisation of system strength and inertia services to rest **wholly** with AEMO, including: • Dispatch • Unit commitment • Co-optimisation • Management of associated constraints	Comply with system security instructions from AEMO.
Incentives	Status quo.	**Positive commercial incentives to be considered more broadly for TNSPs commensurate with the risk involved in delivery of non-network services.**
Service Specification & Timeframes	**System strength needs to be differently defined under AEMO guideline – remove SCR connection point requirements.** Inertia requirements specified under AEMO guideline.	**Minimum AEMO change period for inertia requirements to be extended beyond 12 months to enable completion of RIT-T (or streamlined equivalent) processes.** **Transition timeframes for both services to be extended to enable completion of RIT-T (or streamlined equivalent) processes.**
Cost recovery	Status quo.	**Clear arrangements for recovery of system strength services as network support payments and mechanism to address cash flow risk of delayed cost recovery.**

Conclusion

Given the acute market pressures in South Australia, we would again emphasise our concern to ensure that the Rule changes deliver a balanced and robust framework for improved system security.

The preferred allocation of roles and responsibilities outlined above and other key changes proposed in this submission are intended to assist in providing a more workable set of arrangements to deliver efficient outcomes for consumers and allow TNSPs to more adequately manage their risks and obligations under the new framework in what is an extremely challenging market environment.

As noted at the outset, it is of critical importance to:

- Provide adequate competitive protections, checks and balances under the Rules when TNSPs procure system strength and inertia services;
- Address the material cost recovery and cash flow issues under the Rules to avoid exposing TNSPs to unmanageable risk; and
- Adopt adequate transition arrangements and timeframes given the required lead times involved, including RIT-T processes (or preferably expedited economic assessment processes) with a more logical commencement date for the new services of 1 July 2019.

ElectraNet looks forward to further engagement with the AEMC to resolve these issues in the finalisation of these important Rule changes for implementation.

Please direct any queries in relation to this submission to Simon Appleby in the first instance on (08) 8404 7324.

Yours sincerely

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