20 February 2020

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Mr Mitchell Shannon
Australian Energy Market Commission
Submitted online

AEMC Ref: ERC0278

Dear Mr Shannon

System restart services, standards and testing – Draft Determination

AEMO welcomes many aspects of the draft determination, particularly the AEMC's recognition that the range of services needed to support the restoration of supply may not be inherently provided in a future power system. AEMO is also pleased that the National Electricity Rules will facilitate a regulated process for restart path testing beyond contracted SRAS delivery points, where this is needed to validate expected performance.

While AEMO acknowledges that stakeholder feedback has prompted the AEMC to draft a more preferable rule, AEMO is concerned that some of the draft changes and additional prescription will make the objectives of the rule unnecessarily difficult to achieve.

This is most evident in the draft provisions for testing of system restart paths. It should be recognised that the configuration of NEM infrastructure does not lend itself to end-to-end restart testing without customer impacts.

AEMO needs a system restart testing regime it can administer in a way that accommodates the legitimate requirements and reasonable expectations of test participants in a range of circumstances and test scenarios. After careful review of the test planning and coordination requirements, cost recovery and reporting regime in the draft rule, AEMO considers that the proposed provisions are not practically workable. AEMO have suggested revisions that should deliver a more fit-for-purpose testing regime in which AEMO and all participants assume responsibility for the process that they are best placed to control, with appropriate checks to minimise market impact and balance transparency and confidentiality requirements.

AEMO also has material concerns about:

- The level of detail in the draft rule, and in some cases duplication, in relation to responsibilities and other provisions that are intended to apply broadly.
- The proposed change to the SRAS procurement objective with regard to the long term costs of those services.

AEMO also notes the AEMC's draft determination not to amend the generator access standards to include technical requirements supporting the capability (without the requirement) to provide restoration support services. Without a regulatory impetus it is less likely that the improved supply security outcomes contemplated by the rule change proposal will be achieved. As the

power system continues to transition, it may be necessary to re-evaluate whether it remains appropriate for system restart and restoration support services to be procured through a contract market in its current form.

AEMO welcomes the opportunity to further discuss the matters raised in this submission. Should you have any questions, please contact Kevin Ly, Group Manager Regulation on kevin.ly@aemo.com.au.

Yours sincerely

Peter Geers
Chief Strategy & Markets Officer

Attachments:

AEMO Submission to Draft Rule Determination

Mark-up of draft rule

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Submission on AEMC Draft Determination

February 2020

System restart services, standards and testing Rule

Executive summary

This is AEMO's submission to the AEMC's draft determination on rule changes proposed by AEMO and the AER on SRAS standards, services and testing, together with the draft more preferable rule.

AEMO welcomes many aspects of the draft determination, particularly the AEMC's recognition that the range of services needed to support the restoration of supply may not be inherently provided in a future power system. AEMO is also pleased that the National Electricity Rules will facilitate a regulated process for restart path testing beyond contracted SRAS delivery points, where this is needed to validate expected performance.

While AEMO appreciates the stakeholder feedback that has prompted the AEMC to draft a more preferable rule, we are concerned that some of the draft changes and additional prescription will make the objectives of the rule unnecessarily difficult to achieve.

This is most evident in the draft provisions for testing of system restart paths. It should be recognised that the configuration of NEM infrastructure does not lend itself to end-to-end restart testing without customer impacts. As such, the extent of testing in most regions will be relatively limited in terms of non-TNSP involvement, but with a potentially wide range of electrical network complexity (from comparatively straightforward point-to-point energisation to multiple transformers and other power system elements).

AEMO needs a system restart testing regime it can administer in a way that accommodates the legitimate requirements and reasonable expectations of test participants in a range of circumstances and test scenarios. After careful review of the test planning and coordination requirements, cost recovery and reporting regime in the draft rule, AEMO considers that the proposed provisions are not practically workable. We have suggested revisions that should deliver a more fit-for-purpose regime in which AEMO and all participants assume responsibility for process that they are best placed to control, with appropriate checks to minimise market impact and balance transparency and confidentiality requirements.

Away from the testing provisions, AEMO has material reservations about:

- The level of detail in the draft rule, and in some cases duplication, in relation to responsibilities and other provisions that are intended to apply broadly.
- The proposed change to the SRAS procurement objective with regard to the long term costs of those services.

AEMO also notes the AEMC's draft determination not to amend the generator access standards to include technical requirements supporting the capability (without the requirement) to provide restoration support services. While AEMO appreciates the rationale for this decision, without a regulatory impetus it is less likely that the improved supply security outcomes contemplated by the rule change proposal will be achieved. Ultimately, if this is borne out and as the power system continues to transition, it may be timely to re-evaluate whether it remains appropriate for system restart and restoration support services to be procured through a contract market in its current form.

Contents

1. Definition of SRAS

AEMO appreciates the AEMC's draft decision to amend the definitions of system restart ancillary service and black start capability in terms similar to those requested by AEMO. In relation to the proposed new system restart support services, AEMO intends to commence consultation in late March or early April 2020 on the initial definition of those services for inclusion to in the SRAS Guideline.

2. Generator technical performance standards

The AEMC's draft determination was not to amend the generator access standards to include technical requirements supporting the capability (without the requirement) to provide restoration support services.

AEMO understands generator opposition to the proposed modification of the technical performance standards, which was designed to ensure that new generators have the capability to provide at least one restoration support service. We also acknowledge there is reluctance to add new requirements relatively soon after the 2018 rule change. However, we do not agree with the AEMC's statement that this change would be duplicative of AEMO's 'ability to procure an efficient amount of restoration services'.

AEMO cannot procure any service unless it is offered, and a service cannot be offered if the capability has not been considered and assessed in the design of the plant. In AEMO's experience, unless a particular capability is a regulatory requirement, generators and (most importantly) equipment manufacturers are unlikely to invest effort in its development. Although possible, it is possibly even more unlikely that a generator would be willing to accept the risk involved in post-construction changes to established settings and control systems for the potential upside of a contract.

While AEMO appreciates the rationale for the AEMC's decision, without a regulatory impetus it is less likely that the improved supply security outcomes contemplated by the rule change proposal will be achieved. Ultimately, if this is borne out as the power system continues to transition, it may become timely to re-evaluate whether the contract market for SRAS in its current form remains appropriate for the procurement of system restart and restoration support services.

3. SRAS procurement objective

AEMO proposed a change to the SRAS procurement objective to reference the national electricity objective (NEO), in place of the existing 'lowest cost' requirement. This change was intended to balance both cost and non-cost factors. In this way AEMO could take into account the relative effectiveness of the service provided and the need for system restart and restoration support technologies that will efficiently serve the power system through and beyond the current transformation.

AEMO has no self-interest or hidden agenda in proposing the replacement of the current SRAS procurement objective with the NEO, or something that more closely resembles it. Over several years AEMO has demonstrated very clearly its determination to keep SRAS costs to a minimum - to the extent possible in the current limited contract market framework. AEMO's remit does not, and within the NEO never could, extend to underwriting new investment for its own sake, or contracting new providers in lieu of existing lower cost plant that has both the capability and reliability to continue to contribute to the system restart standard.

The 'perceived' barrier to efficient long term procurement outcomes is well-demonstrated by a statement in Snowy Hydro's submission to the AEMC's consultation paper. In seeking to restrict AEMO's ability to 'prefer new, more expensive providers', Snowy Hydro argues that existing SRAS capability is 'by definition, more efficient'.

This is exactly the dilemma posed by the existing SRAS procurement objective, except that (given the wording of the objective) you need to substitute 'cheaper' for 'more efficient'.

The NEO is a common objective that applies to guide the exercise of functions by all market bodies, including AEMO, as the independent bodies tasked with the operation and administration of the NEM. In relation to SRAS, AEMO and the Reliability Panel have different and separate functions clearly defined in the rules. There is no reason why the NEO should not guide the exercise of both (as it does many other related functions of different market bodies). AEMO questions how this could lead to any blurring of those responsibilities. AEMO's SRAS procurement follows from the determination of the system restart standard. AEMO must use reasonable endeavours to meet the standard; it cannot redefine that standard and has no intention of seeking to do so through its procurement.

Nevertheless, if the AEMC remains of the view that the NEO alone is insufficient to guide SRAS procurement, AEMO suggests that the word "overall" does not convey any sense of the longer term, which was both AEMO's objective in proposing this change and the AEMC's expressed intent (draft determination, page iii). If the SRAS objective were as proposed in the draft rule - AEMO must use reasonable endeavours to acquire SRAS to meet the system restart standard 'at the lowest overall cost':

- The adjective "overall" is still referable exclusively to cost.
- In the context of the requirement, "overall" would be read simply to include all the services needed to meet the system restart standard at any time.

On that basis, "overall" does not add further meaning to the current SRAS procurement objective. In order to imply the intended meaning as expressed in the draft determination, it would be necessary to use the AEMC's determination as 'rules extrinsic material' to interpret the objective. AEMO suggests that it is preferable for the meaning to be clearly articulated in the rules, for example as the "lowest long-term cost".

4. System restart testing

4.1 Extended system restart testing

To ensure there is no confusion arising from the terminology, AEMO emphasises that its proposed rule is not concerned with 'SRAS' testing per se. Testing rights and obligations have long been established through SRAS contracts, supported through rules obligations and more recently (in 2017) reinforced by additional requirements in the SRAS Guideline. Tests of the services themselves establish that a provider can deliver its contracted capability to energise the transmission network at or closest to its connection point.

The aim of this rule change is to establish a consistent and certain framework for practical testing of the initial system restart path from the point of delivery of an SRAS further into the transmission network, to a point where further transmission lines, transformers and auxiliaries of key non-SRAS generators are energised. This could include sections of distribution network to the extent the tests will not result in customer disruption. Such tests have historically been sporadic and very limited in scope, requiring the cooperation of TNSPs and other participants who see an advantage in establishing greater certainty.

AEMO is fully cognisant of the fact that extensive network restoration testing in the current NEM grid will not be possible in many locations without material commercial and operational disruption. This is not, and has never been, our intent. AEMO's proposal explicitly recognised that these tests should occur with minimal variation from dispatch and no involuntary interruption of load. Consequently it is also important to acknowledge that the scope of system restart tests will continue to be relatively limited in several sub-networks.

The framework proposed in the draft rule for system restart testing is not practical to implement. AEMO considers the framework:

- is administratively unnecessarily burdensome;
- does not appropriately allocate responsibilities to the participants best placed to undertake them;

- makes no allowance for the diversity of restart paths and corresponding testing that will be practical without involuntary customer impact;
- creates a hybrid compensation scheme that is unnecessarily costly and time consuming to administer, and not workable in its current form.

Adding a requirement (not requested by AEMO) to complete testing at least every three years in each sub-network makes it a difficult choice between this regime and the status quo of none at all.

AEMO's detailed concerns on the testing proposal and suggested alternatives are set out in Appendix 1.

AEMO also proposes a transitional provision to bring any tests currently in the planning stage into the final amended framework. This will create certainty of cost recovery for all affected participants and minimise incentives to delay.

4.2 SRAS test procedures (SRAS Guideline)

New clause 3.11.7(d)(4A) in the draft rule indicates that AEMO's SRAS Guideline must specify a 'process' for assessing whether the arrangements for testing of a system restart ancillary service are consistent with those that will be used in an actual event.

The detailed test procedures must be developed by the SRAS Provider and the TNSP (and, if relevant, any third parties whose equipment is required to energise the agreed delivery point on the transmission network). AEMO will not be in a position to specify any process by which those parties should compare or assess those arrangements. Accordingly, all that can be specified in the SRAS Guideline are 'requirements' for the relevant participants to undertake this assessment.

5. Roles, responsibilities and communication protocols

5.1 Power system security responsibilities

The proposed new clause 4.3.1(paa):

- partially duplicates clause 4.3.1(p);
- calls out testing of SRAS, which is just one part of the procurement and ongoing contract process among other equally important elements;
- refers to the 'development of system restart ancillary services', which AEMO has no ability to do (this may be a typo intended to refer to the system restart plan); and
- extends the adjective 'effective' to describe the response to a major supply disruption and the restoration of supply; AEMO has limited control over whether these things will be 'effective' – as opposed to effective planning or coordination (which the current rules provide for).

AEMO again requests the AEMC to incorporate any additional detail considered to be necessary in relation to system restart planning into the existing clause 4.3.1(p) and to remove any potential for conflict with more detailed rights and obligations in rules 3.11 or 4.8. AEMO has proposed alternative drafting to achieve this.

5.2 System restart communication protocols

The draft rule broadens and generalises the scope of the communication protocols as currently envisaged under NER clause 4.8.12(j) of the NER. The current provision is expressly limited to communication protocols prepared for use in the implementation of the system restart plan.

That is, its current purpose is operational, describing how AEMO, NSPs and Generators will give and receive instructions and information during a restoration situation.

AEMO does not object in principle to an expansion of the scope of these 'communications' to include the routine exchange of relevant operational information in preparation for a major supply disruption, but notes its expectation that:

- To avoid inconsistency, the content of the communication protocols will not overlap with the content and processes for local black system procedures (LBSP) and the SRAS contracts and guidelines. In that respect, AEMO proposes to provide generator (and if provided, customer) LBSPs to the relevant connecting NSP(s).
- The protocols will not disrupt the established channels of operational and emergency communication. There are long-standing protocols under which AEMO, TNSPs and DNSPs each communicate with the participants and customers with whom they are best placed to establish contact and control.
- The rules should not be unnecessarily prescriptive or specific in relation to the exchange of information. For example, network switching will rarely involve a generator's equipment, but there may well be other steps that must be taken before a particular generator can be energised or synchronise to the grid.

AEMO has also suggested some clarificatory changes to the draft rule.

Given the additional details proposed to be included in the communication protocols under the draft rule, and the much more extensive role that TNSPs and DNSPs would need to play in the preparation of the protocol, transitional provisions will be required. As there are many competing priorities in the operational space, AEMO proposes a period of at least 12 months to update the existing communication protocols to take the amending rule into account. AEMO submits that there is no greater urgency that justifies displacing other work. The concern underlying the proposed changes stems from a serious, but isolated, issue relating to the capability of the network elements of the Quarantine Power Station (QPS) SRAS during the 2016 black system event. This gap has already been addressed through changes to the SRAS Guideline, which will be reinforced by the proposed draft rule amendments to clause 3.11.7(d).

6. Local black system procedures

The draft Rule states that the LBSP must 'include any action the Generator or NSP must take following any major supply disruption…'.

AEMO understands that the primary intent of this amendment is to cover generator-specific switching procedures, although we recognise it is deliberately not limited to those things. However, the draft provision as worded is probably not appropriate for LBSPs, because the things that a participant *must* do are likely to change depending on the circumstances, and it will be AEMO or the NSP's role to instruct the participant to do whatever is necessary.

As an example, AEMO's recently amended LBSP Guidelines do explicitly require the provision of 'proposed switching procedures', noting that things may change on the day. With the exception of processes pre-defined in SRAS contracts and (potentially) energy support arrangements, there are many variables that need to be accommodated in a system restoration. As such, there will rarely be specific step by step procedures that *must* occur following any major supply disruption. Further, the draft rule implies knowledge of the system restart plan – in order to comply with the LBSP information requirement the generator/NSP would need to have an understanding of the plan. This will not necessarily be the case.

AEMO suggests the proposed clause 4.8.12(f)(1A) either be removed, or is reworded as "include actions the Generator or Network Service Provider may need to undertake following any major supply disruption prior to *energisation* or *synchronisation*".

7. Miscellaneous

7.1 Clarification of scope of system restart standard

The draft determination incorrectly states that the SRS requirements includes the length of time within which defined volumes of load need to be restored in a region following a black system event (section 2.2).

The SRS is related to amounts of supply to be restored. This is an important distinction especially if we consider new types of SRAS (restoration services only for the purposes of meeting the SRS- restoration of supply).

7.2 Transitional rule for SRAS Guideline

While AEMO's wishes to seek to amend the SRAS Guideline as soon as possible, it also recognises that the amendments required may not be straightforward and issues may be raised in consultation that AEMO has not considered. On further consideration of the draft rule, AEMO suggests that a longer period is allowed for completion of the consultation. Assuming the final rule is made in early April 2020, a revised date of 2 November 2020 is proposed. This still meets the objective of finalising the Guideline in time to initiate an SRAS procurement process in Q4, 2020.

8. Draft rule

AEMO has provided suggested changes to the draft Rule to support its proposals in this submission in Appendix 2, as well as additional drafting amendments for clarity.

A1. Appendix 1 – Detailed response to testing proposals

Item	Issue in Draft Rule/Determination	Recommendation
Mandatory testing in each sub-network	Draft Rule – 4.3.6(a), 3.11.7(d)(3A) The AEMC has proposed AEMO must undertake system restart testing at least every 3 years in each sub-network, with the SRAS Guidelines to include guidance on the frequency of testing and the factors influencing AEMO's decision to conduct a test. The observation in the draft determination (p.72) that such tests have historically been undertaken about once a year is inaccurate. SRAS tests are typically carried out once or twice a year. Tests further into the network than the contracted SRAS delivery point have been sporadic and limited in scope, requiring cooperation of TNSPs and other parties who had a direct interest in the results and so were incentivised to participate. The 3 year minimum requirement was not requested by AEMO and does not seem to have been proposed in submissions. It cannot reasonably be met for the following reasons: • AEMO itself cannot 'undertake' the tests and has limited control over timing. Even once planned, there is significant dependence on power system conditions. • The process in draft clause 4.3.6 involves a period far in excess of 6 months for each test. We currently have 6 sub-networks – if all were tested in sequence this could not be achieved within 3 years. AEMO does not have resources to dedicate to a continuous testing process, much less parallel testing in more than one sub-network. • The need for testing will typically be driven by changes to the conditions in relevant parts of a sub-network that cannot be reliably assessed by modelling alone. The ability to test is also restricted by practical considerations. Both the pace of change and network topology are hugely varied between sub-networks (and parts of sub-networks). This also makes it impossible to give meaningful guidance on the frequency of testing in the SRAS Guideline. • This means some sub-networks will change more quickly than others meaning different testing frequency is appropriate. Conversely, there is no point in repeating the same test every 3 years if little has changed.	Remove the requirement to test in each sub-network at least every 3 years. The SRAS Guideline can provide an indication of the factors that would influence AEMO's decision to require a test (as required in clause 3.11.7(d)(3A), but the requirement to include guidance on frequency of testing should be removed.

Responsibility for testing	Draft Rule – 4.3.6(a)–(d) & (k) The draft determination states that 'AEMO is the party best placed to manage the testing process.....given its knowledge and expertise as the system operator' (Appendix D.6.1). AEMO has knowledge and past experience in co-ordinating/witnessing these tests and ultimately must decide whether and when they can proceed. However, TNSPs have the requisite knowledge, skills and experience of their own networks and, to a greater extent than AEMO, connected equipment, to help identify test requirements and develop the necessary detailed test procedures. TNSPs are also responsible for submitting outages to AEMO. Previous SRAS testing has actively involved TNSPs, and not just in consultation. TNSPs must be the primary contributors to parts of a test program, and test feasibility must also be a joint or TNSP-led activity. In some cases, TNSPs themselves have requested these tests to occur and the rules should recognise that possibility. This is why AEMO's proposed rule followed a similar process as existing provisions in the rules that allow AEMO to require an NSP or other registered participant to conduct tests on its equipment if AEMO has identified a relevant issue or concern (e.g. 5.7.3(d), 5.7.3A(e), 5.7.6(b). An alternative would be to base the process for preparation of the test program loosely on clause 5.7.7 (inter-network tests), but noting that: • inter-network tests could be significantly more extensive and involve more participants than system restart tests; • it is essential that NSPs and (if required) other registered participants are required to contribute to the development of the plan in a timely way. It should also be noted that the communication protocols under clause 4.8.12 will **not** describe how and which plant is going to participate in system restart tests.	Revise 4.3.6 to recognise the following roles and responsibilities of AEMO and each participant: 1. **Initiation by AEMO or TNSP** The draft rule (and the proposed rule) provides for AEMO to initiate the test process, but sometimes the initiative will come from a TNSP. Either the rules can explicitly reflect that, or the SRAS Guideline can specify that AEMO can initiate a test at the TNSP's request. Remove the reference to clause 4.8.12(j) from clause 4.3.6(b). 2. **AEMO and the TNSP jointly:** a. Create the overall test program. This includes the test objective, overall path, plant involved, success measures, restrictions, preconditions, contingencies, and timing. The definition of a test program includes test procedures. Normally there are different layers of test procedures - the overall path (high-level steps determined by AEMO/TNSP jointly), and detailed test procedures for NSP and (if relevant) Generator equipment (prepared by the NSP and relevant generator, who must take responsibility for those elements within the plan). b. Determine the test window and exact test date TNSPs must share responsibility for determining test timeframes and dates, as details of planned outages and asset maintenance activities may not yet have been notified to AEMO. TNSPs also provide the limits advice required for the test. Input from any other impacted participants would also be sought and taken into consideration in determining the test window/dates to avoid. 3. **AEMO primary responsibility:** Power system security issues related to testing dates. For example, considering outages in other regions and impacts on interconnector flows, system strength etc. AEMO also prepares constraint equations based on limits advice or system security considerations. 4. **TNSP primary responsibility:** Prepare and provide detailed test procedures for its equipment within a prescribed time. 5. **Generator/other impacted participant responsibility:** Prepare and provide detailed test procedures for its equipment within a set time.
Notice period and test program	Draft Rule – 4.3.6(f) and (g) The draft rule requires a minimum 6 months between providing the test plan to all relevant participants and actually conducting the test. The draft determination provides no reason for the choice of 6 months other than to "provide affected	A reasonable, practical notice period for system restart testing should take into account the entire context and range of conditions – including the test planning process, number of elements/participants involved, opportunities to take advantage of temporary conditions and outages returning to service, need for system security

	participants with sufficient notice prior to a test being undertaken to allow those participants to adjust their operations as required to minimise the costs and operational impacts of the test" (p.74). A 6-month notice period is impractical, unnecessary and potentially frustrates the purpose of the test. It is also significantly out of step with other test notice periods: • Given the test program will take some time to develop, the overall period from commencing planning to conducting the test would far exceed 6 months. • As all affected registered participants are to have input to the test plan (and will need to develop test procedures relevant to their own equipment), they will have had plenty of notice before the test plan is finalised. • Even for inter-network tests, the minimum notice period from finalisation and provision of the test plan is 20 business days (NER 5.7.7(t)). AEMO's proposal for system restart tests was 30 business days, as current practice for planned network outages is for NSPs to give AEMO 6 weeks' notice. • Acknowledging that conditions need to be adjusted to simulate restart conditions for testing, the facilities included in the test should otherwise be as close as practicable to what could occur during restoration. We do not want participants to make special adjustments to their equipment to ensure it 'works', if they may not be in place when an unexpected major supply disruption occurs. So lead times do not need to accommodate operational adjustments. • Some tests may only involve only energising a transmission line and/or a transformer, in a part of the network which would not impact on interconnector flows or non-SRAS Generators, or require new system security constraints. In some cases, tests can be conducted because the opportunity arises. The opportunity to carry out these simple tests at short notice should not be frustrated by mandated notice periods (note they will still be subject to finalising the test plan with the same cooperative process). • The windows for conducting tests throughout the year are seasonal and, on average, becoming shorter as climactic conditions become more extreme and maintenance periods expand for assets that are ageing and operating differently. A very long notice requirement at the end of an indefinite test planning process means we could miss the windows for most of the year.	constraints, etc. - and allow for the impacted parties and AEMO to agree a shorter notice period if convenient. • AEMO notice of proposal to conduct test initiates the test planning/procedure process. AEMO notifies TNSP and directly affected generators/SRAS providers, TNSP to notify any other affected registered participants it considers should participate within a further 10 business days. • Test program preparation to be an iterative process requiring collaboration between AEMO, TNSP and any other participant whose plant will be part of the test. Participants have 10 business days to respond to AEMO's requests for information required for the program in relation to that participant's facility, and otherwise should prepare the detailed test procedures applicable to their plant within 15 business days. • As required by the definition of that term, a test program must include the proposed timing of the test. System restart test programs can also include test windows within which the proposed test date can be shifted. The first window will open not less than 30 business days after final test program is distributed, unless AEMO and all impacted participants agree a shorter period. • Actual test date within the window will be determined by required conditions, in accordance with the test program. Always subject to rescheduling (within the window) if conditions are not met on an appointed date.

Generator technical input apply to restart path test	The AEMC notes that '*generators may have knowledge about limitations on the way any of their plant that will be involved in the test should be operated that is not available to AEMO or the TNSP*' (Appendix D.6.1 – Timing and design of restart path tests). In fact Generator plant limitations for a restart test should be provided in the LBSP as this could mean there may be limitations for actual restoration, not just for the test. Limitations could also have impacts on the implementation of the system restart plan and therefore AEMO would need advance notice of this when developing restart plans, not at the point of creating a test program. Particularly known limitations for procured SRAS need to be provided to AEMO during SRAS procurement (ITT and within the SRAS agreements).	The AEMC emphasise the importance of full disclosure in the LBSPs, which is their primary purpose.
Cost recovery for affected generators	<u>Draft Rule – 4.3.6(l)-(n)</u> The draft Rule provides that an instruction to participate in planning for, preparing or participating in a test is to be considered a *direction* for an 'other' service. On that basis the draft rule provides for compensation to be payable under the corresponding provision for 'other' services – 3.15.7A – which provides for a 'fair payment price' for that service. However, the compensation regime is then altered to the extent that the only remaining meaningful element of 3.15.7A is the requirement for the amount to be determined by the independent expert. There is no reason why treating the requirement to participate in a test as a direction requires the rule to choose one of the existing compensation mechanisms to apply and modify. This is confusing and contradictory. Invoking the directions regime requires activation of the clauses that provide for recovery of the cost of directions in the settlement process. These are clauses that are complex and interwoven, importing requirements that should not apply to this situation. The current drafting does not do that, and achieving this outcome would add even further layers of intricacy to the drafting. If these issues can be overcome, other specific questions include: • The nature of the amounts to be considered must come from the participant – they cannot be calculated in the absence of a submission from the participant (not contemplated under 3.15.7A, but more aligned with 3.15.7B). • The limitations on heads of costs preclude compensation from being a fair market price, yet some 'market'- related principles are still somehow to be considered. • There is ambiguity about whether costs relating to planning and preparation can be claimed. • Some of the heads of cost are similar to some of those mentioned in 3.15.7B, but not identical. Preferable not to diverge if the intended meaning is the same. • What cost impacts are contemplated as a result of 'wear and tear', over and above additional maintenance costs?	It would be possible, simpler and clearer to draft a simpler bespoke mechanism, which can refer to specific elements of the existing compensation rules where appropriate and otherwise exclude them. Two possible options are suggested for consideration: A mechanism where AEMO pays the direct costs of the relevant participant, subject to IE determination if not agreed, and recovers the payments either through participant fees or as an additional component of SRAS cost recovery under 3.15.6A(d). This would be AEMO's preferred option in terms of simplicity of both administration and drafting. If there is a reason why this must be treated as a direction, a separate compensation methodology to the exclusion of the others in 3.15.7(c), 3.15.7A and 3.15.7B, but which can refer to specific elements of those provisions as required. This mechanism: • Should not seek to apply any fair payment price concepts or principles, since this cannot be a market service and the limitations on the heads of claim effectively preclude a commercial assessment. • Requires the participant to submit a claim. • Can refer to 3.15.7A in relation to the appointment and determination of an independent expert, but allow AEMO to approve the claim itself if it is either under a given threshold or not agreed. • Should clarify that planning and preparation costs are not allowable (or if they are, on what basis). • Should describe direct costs in the same terms as 3.15.7B to the extent they are intended to cover the same ground. • Must provide a route for cost recovery, via clauses 3.15.7(a), 3.15.8 and possibly 3.12.2. DNSPs must be included in 4.3.6(l) and (o). For cost-recovery purposes they will not be entitled to claim compensation, but their revenue determination should account for their participation in system restart tests if required.

	• Both the limitations on the compensable costs and the limited participation mean that very few, if any, generators are likely to have significant direct costs. Consideration should be given to a claim threshold or (and) and ability for AEMO to refer to the expert where claims are large or contested. • Although system restart tests will not impact distribution customers, it is possible that DNSPs may need to be involved in the initial stages of a test, for example if the initiating generator is connected to a distribution network. The draft rule doesn't recognise this.	Additional drafting improvements should be considered – suggested in AEMO's mark-up of the draft rule.
Reporting on outcomes in achievement of the SRS	Draft Rule – 4.3.6(p)(3) The system restart standard (SRS) is not an operational standard but a procurement one. In practice, achieving the restoration levels and times in the SRS cannot be guaranteed given the range of potential black system conditions. The test itself will not be able to confirm that the system restart plan 'operated' consistently with the achievement of the SRS – only whether the test results demonstrated that was feasible, as far as it went. With the NEM in its current configuration, only the early stages of a system restart plan can be tested without customer impact or material market consequences. Any public reporting on test outcomes can only be at a high level. For example, AEMO could simply state the test did or did not demonstrate the objectives, and in what way. To do significantly more than that would involve revealing the system restart plan, which is confidential and sensitive information. As AEMO is not aware of any particular rationale for public reporting, it is suggested that these outcomes would be more appropriately communicated as part of the annual SRAS reporting that AEMO undertakes. On the other hand, sharing more detailed results with the test participants will be beneficial for all concerned, facilitating the resolution of any unknown or unexpected interactions.	AEMO will report to the participants in each test on the performance of their plant and any unknown or unexpected results. Detailed results will be shared with the registered participants who participated. For these purposes each participant whose plant was involved will be required to give AEMO relevant measurement data and recordings. AEMO can specify general requirements in the SRAS Guideline in this regard. High level results (whether or not the test results indicated the SRS was achievable) will be included in AEMO's published annual reporting under clause 3.11.10.
Reporting on consultation & cost outcomes	Draft Rule – 4.3.6(p)(1) & (2) These reporting obligations appear similar to consultation reports and not a typical test report. There is no precedent in other testing provisions that require coordination and necessarily involve expense. The Participants that are involved in the test would know what is in the test program and how it addresses inputs and costs. Feedback from registered participants will either be (from NSPs) about the practicality of the restart path and the system conditions that have to be present or arranged, or about the same subject matter as paragraph (2), i.e. minimising coats and operational impacts.	Remove the requirement for AEMO to publicly report on how AEMO's consultation with test participants or minimise cost and impact. Alternatively, explain and justify the purpose and benefit of this reporting, and how it could be done without revealing the identity of the participants involved and the restart path.

Transitional provision for testing currently planned	Draft Rule – 4.3.6(m) AEMO is currently seeking to organise SRAS extended network in VIC and NSW for Q2 2020. Given the amount of work and effort involved in their organisation, it is important to ensure this is not lost by, for example, the participants involved seeking to defer the test to take advantage of the compensation regime. Transitional arrangements are therefore required to allow the conduct of those tests even if the notification, planning and scheduling steps (having been done by agreement) did not meet the new requirements, while allowing the new provisions relating to cost recovery and STPIS exemptions to apply.	Include transitional arrangements in Chapter 11 to cover testing already planned prior to the rule being made.

A2. Appendix 2 – Suggested amendments to draft rule

Submitted as separate document.

Attachment to AEMO Submission on draft determination February 2020 - Suggested revisions to draft rule

Draft National Electricity Amendment (System restart services, standards and testing) Rule 2020

under the National Electricity Law to the extent applied by:

(a) the National Electricity (South Australia) Act 1996 of South Australia;
(b) the Electricity (National Scheme) Act 1997 of the Australian Capital Territory;
(c) the Electricity - National Scheme (Queensland) Act 1997 of Queensland;
(d) the Electricity - National Scheme (Tasmania) Act 1999 of Tasmania;
(e) the National Electricity (New South Wales) Act 1997 of New South Wales;
(f) the National Electricity (Victoria) Act 2005 of Victoria;
(g) the National Electricity (Northern Territory) (National Uniform Legislation) Act 2015 of the Northern Territory; and
(h) the Australian Energy Market Act 2004 of the Commonwealth.

The Australian Energy Market Commission makes the following Rule under the National Electricity Law.

John Pierce
Chairman
Australian Energy Market Commission

Attachment to AEMO Submission on draft determination February 2020 - Suggested revisions to draft rule

Draft National Electricity Amendment (System restart services, standards and testing) Rule 2020

1 Title of Rule

This Rule is the *Draft National Electricity Amendment (System restart services, standards and testing) Rule 2020.*

2 Commencement

Schedule 1 of this Rule commences operation on 1 October 2020.

Schedule 2 of this Rule commences operation on [2 April 2020].

3 Amendment to the National Electricity Rules

The National Electricity Rules are amended as set out in Schedule 1.

4 Savings and Transitional Amendment to the National Electricity Rules

The National Electricity Rules are amended as set out in Schedule 2.

Attachment to AEMO Submission on draft determination February 2020 - Suggested revisions to draft rule

Schedule 1 Amendment to the National Electricity Rules

(Clause 3)

[1] Clause 3.11.7 Guidelines and objectives for acquisition of system restart ancillary services by AEMO

In clause 3.11.7(a1), after "lowest" insert "long term~~overall~~".

[2] Clause 3.11.7 Guidelines and objectives for acquisition of system restart ancillary services by AEMO

In clause 3.11.7(c), after "lowest" insert "long term~~overall~~".

[3] Clause 3.11.7 Guidelines and objectives for acquisition of system restart ancillary services by AEMO

After clause 3.11.7(d)(3), insert a new clause 3.11.7(d)(3A) and (3B):

(3A) guidance to *Registered Participants* on ~~the frequency with which testing under clause 4.3.6 is likely to occur and~~ the factors influencing a decision of *AEMO* to conduct a test under clause 4.3.6(~~a~~b), including (but not limited to) the types of conditions or changes in the *power system* which could necessitate a test;

(3B) guidance to *Registered Participants* required to participate in a test under clause 4.3.6 on the measurements and data to be reported to *AEMO* about the operation of their *plant* during the test;

[4] Clause 3.11.7 Guidelines and objectives for acquisition of system restart ancillary services by AEMO

After clause 3.11.7(d)(4), insert a new clause 3.11.7(d)(4A):

(4A) requirements designed to ~~a process for~~ identify any inconsistencies between ~~assessing whether~~ the arrangements used in the testing of *system restart ancillary services* and~~re consistent with~~ those planned to be used in the deployment of *system restart ancillary services* following a *major supply disruption* and assess~~ing~~ the impact of any inconsistencies;

[5] Clause 3.11.10 Reporting

After clause 3.11.10(b)(2), insert a new clause 3.11.10(b)(3):

(3) whether or not the results of any test conducted for any sub-network under clause 4.3.6 indicated the *system restart plan* as it relates to that *electrical sub-network* is likely to be consistent

with the achievement of the *system restart standard* and the *AEMO power system security responsibilities*;

~~[5]~~ Clause 4.3.1 Responsibility of AEMO for power [6] system security

Omit clause 4.3.1(p) and substitute:

(p) to manage activities reasonably required to effectively prepare for and coordinate a response to a *major supply disruption*, including but not limited to:

(1) procuring adequate *system restart ancillary services* in accordance with clause 3.11.9 to enable *AEMO* to co-ordinate a response to a *major supply disruption*;

(2) developing the *system restart plan* and coordinating activities among *Registered Participants* as reasonably necessary to prepare for the implementation of the *system restart plan*; and

(3) managing and coordinating the restoration of *supply* following a *major supply disruption*.

~~After clause 4.3.1(pa), insert a new clause 4.3.1(paa):~~

~~(paa) to manage and coordinate any activities reasonably required to prepare for and implement an effective response to a *major supply disruption*. Such activities include (but are not limited to):~~

~~(1) overseeing the testing of *system restart ancillary services* or any other equipment or process *AEMO* reasonably requires to be tested; and~~

~~(2) managing and coordinating the effective restoration of *supply*, including the development of *system restart ancillary services*;~~

[7] Clause 4.3.4 Network Service Providers

After clause 4.3.4(a), insert a new clause 4.3.4(a1):

(a1) Each *Network Service Provider* must:

(1) ~~participate in and~~ facilitate testing of *system restart ancillary services* and tests under clause 4.3.6, and conduct or facilitate those tests as required;

(2) comply with the *SRAS Guideline*; and

(3) take all reasonable steps to facilitate the effective deployment of *system restart ancillary services*.

[8] Clause 4.3.6 System restart test obligations

After clause 4.3.5, insert a new clause 4.3.6:

4.3.6 System restart test obligations

Test program

(a) In relation to a test under this clause 4.3.6, **Test Participants** means the relevant *Transmission Network Service Provider* and the *Registered Participants* notified of the test under paragraph (b) or identified under paragraph (c).

~~(a)~~(b) ~~At least once every 3 years,~~ *AEMO* may, by notice to the relevant *Transmission Network Service Provider*, *SRAS Providers* and any other *Generator* that *AEMO* considers would be required to participate, request the conduct of a test for an ~~must undertake a test for each~~ *electrical sub-network* to verify whether the *system restart plan* as it relates to that *electrical sub-network* is likely to be consistent with the achievement of the *system restart standard* or the *AEMO power system security responsibilities*. ~~for that *electrical sub-network*. *AEMO* must notify the relevant *Transmission Network Service Provider* of its intention to undertake a test in respect of that *electrical sub-network*.~~

~~(b)~~(c) If a *Transmission Network Service Provider* receives a notice under paragraph (b~~a~~), it must within 10 *business days* notify *AEMO* of any other *Registered Participant* in respect of *plant* connected to its *network* that it considers would be ~~is~~ required to participate in the test. ~~in accordance with the relevant procedures developed under clause 4.8.12(j).~~

(d) *AEMO* must consult with the Test Participants ~~*Transmission Network Service Provider* and the *Registered Participants* notified under paragraph (b)~~ on the timing and scope of the test and, after considering ~~consider~~ any submissions, notify the Test Participants of the proposed *energization* path and approximate timing of the test ~~when preparing the *test program*~~.

(e) Each Test Participant must:

(1) within 15 *business days* of receiving notification under paragraph (d), prepare and submit to *AEMO* detailed test procedures for its *plant* that will be included in the test; and

~~(1)~~(2) within 10 *business days* of receiving a request, provide any other information reasonably requested by *AEMO* or the *Transmission Network Service Provider* about the operation of that *plant*.

~~(c)~~(f) After consulting with the Test Participants and incorporating the test procedures and any other information provided under paragraph (e), ~~relevant *Transmission Network Service Provider* and *Registered Participants* under paragraph (c),~~ *AEMO* may prepare the *test program* for the test and provide that *test program* to the Test Participants~~*Transmission Network Service Provider* and the *Registered Participants*~~.

~~(d)~~(g) The *test program* must be designed to achieve the objective of the test set out in paragraph (b~~a~~) having regard to the following principles:

(1) *power system security* must be maintained in accordance with Chapter 4;

(2) the extent and duration of variation from the *central dispatch* outcomes that would otherwise occur in the absence of the test should be minimised; and

(3) to the extent reasonably practicable, the timing, duration and technical specifications of the test should consider and be coordinated with the operational requirements of the Test Participants ~~*Transmission Network Service Provider* and other affected *Registered Participants*~~ so as to minimise the cost and impact of the test on the operations of all parties.

~~(e)~~(h) The *test program* must include, in addition to the proposed test date, one or more ~~a~~ test windows~~period~~, each being a specified period of not more than four weeks ~~four week period~~ in which the test date may ~~will~~ occur and, unless otherwise agreed by AEMO and all Test Participants, the earliest test window ~~which period~~ must start at least 30 *business days* ~~6 months~~ after the date the *test program* is provided to the Test Participants~~*Transmission Network Service Provider* and the *Registered Participants*~~.

~~(f) At least 20 *business days* prior to the start of the test period, *AEMO* must notify the *Transmission Network Service Provider* and the *Registered Participants* of the date on which the test will occur in the test period.~~

~~(g)~~(i) If, at any time before or during a test under this clause 4.3.6, *AEMO* considers that it is necessary to modify the *test program* (including its timing), *AEMO* may modify the *test program* by giving notice as soon as reasonably practicable to the Test Participants~~*Transmission Network Service Provider* and *Registered Participants*~~. If *AEMO* defers the test, it must reschedule the test as soon as reasonably practicable having regard to the principles in paragraph (~~e~~g).

~~(h)~~(j) *AEMO* and the Test Participants ~~*Transmission Network Service Provider*~~ must conduct the test in accordance with the *test program*, as modified under paragraph (i).

~~(i)~~(k) Each Test Participant ~~*Registered Participant* whose *plant* is included in a test under this clause 4.3.6 (including the *Transmission Network Service Provider*, as applicable)~~ must:

(1) prepare and provide the test procedures and information required under paragraph (e) ~~provide information reasonably requested by *AEMO* or the *Transmission Network Service Provider* for the purpose of the test and ensure that such information is prepared~~ in accordance with *good electricity*

industry practice;

(2) cooperate with, and comply with instructions given by, *AEMO* and the *Transmission Network Service Provider* in ~~planning, preparing for and~~ conducting the test; and

(3) act in good faith in respect of, and not unreasonably delay, the preparation for and conduct of the test.

Costs

~~(j)~~(l) Each *Registered Participant* and *AEMO* must bear its own costs associated with tests conducted under this clause 4.3.6 except to the extent provided for under this clause 4.3.6. Nothing in this clause 4.3.6 prevents recovery of testing costs under an *ancillary services agreement*.

~~(k)~~(m) If an instruction is given to a *Registered Participant* (other than a *Transmission Network Service Provider*, *Distribution Network Service Provider* or *SRAS Provider*) by *AEMO* or the *Transmission Network Service Provider* under subparagraph (kj)(2) ~~and such instruction is not given under an *ancillary services agreement*~~, then subject to ~~for the purposes of~~ this clause 4.3.6: ~~3.15.7A only:~~

(1) the instruction is taken to be a *direction*, but is not an *AEMO intervention event* for the purposes of clause 3.9.3 or 3.13.6A ~~for services other than energy and market ancillary services~~; ~~and~~

(2) the *Registered Participant* is taken to be a *Directed Participant*, irrespective of the type of *plant* involved in the test;

(3) there are no *Affected Participants* in respect of the *direction*; and~~,~~

~~(2)~~(4) ~~and~~ *AEMO* must pay compensation to the ~~that~~ *Directed Participant* determined under paragraphs (n) and (o). ~~in respect of a test must be compensated at the fair payment price of the services determined in accordance with clause 3.15.7A, as modified under paragraph (m).~~

(n) A *Directed Participant* under paragraph (m) may, within 10 *business days* after the date of a test, submit a written claim to *AEMO* for compensation in respect of its direct costs incurred as a result of its participation in the test, where:

~~(l) The following principles and amendments apply to the application of clause 3.15.7A to a *Directed Participant* under paragraph (l):~~

~~(1) the *Directed Participant* is only entitled to compensation for direct costs incurred as a result of the test;~~

~~(2)~~(1) direct costs include fuel costs and~~,~~ incremental operation and maintenance costs ~~and wear and tear~~ attributable to the specific circumstances related to the *plant's* operation during the test;

and

(2) direct costs exclude claims for loss of revenue (including from the *market*), losses by third parties and opportunity costs;~~, including lost revenue from the *market*;~~

and the claim must contain sufficient detail and supporting information to substantiate each component of direct costs claimed.

~~(3) the principles in clause 3.15.7A(c)(1)(ii)(C) and (D) do not apply; and~~

~~(4) clauses 3.15.7A(c) and (c1) do not apply.~~

(o) *AEMO* must:

(1) if the total amount of all claims by *Directed Participants* in relation to the same test is less than $100,000 and *AEMO* determines in its sole discretion that all such claims are reasonable, pay the amount claimed in accordance with clause 3.15.10C; and

(2) otherwise, refer the claim to an independent expert to determine the claim in accordance with clause 3.12.3 and the principles in paragraph (n).

~~(m)~~(p) A~~The~~ *Directed Participant* under paragraph (1) is not entitled to any compensation in relation to a test pursuant to clause 3.15.7B.

~~(n)~~(q) The *AER* must exclude the impact of any testing under this clause 4.3.6 from the operation of a *service target performance incentive scheme* for a *Transmission Network Service Provider*.

Results and ~~Post-test~~ report~~ing~~

(r) Each Test Participant must:

(1) within 1 month of completion of a test, give *AEMO* any relevant data, measurements, results and analysis required by the *SRAS Guideline* or the *test program*; and

(2) promptly comply with any reasonable request by *AEMO* for other data, measurements, results and analysis of the performance of its *plant* in the test,

(s) Within 3 months of completion of a test, *AEMO* must~~ prepare and publish a report outlining~~:

(1) provide a detailed report to the *Transmission Network Service Provider* on the results of the test; and

(2) report to each other Test Participant on the performance of its *plant* in the test.

~~(1) how *AEMO* sought to incorporate the results of its consultation~~

~~with the *Transmission Network Service Provider* and affected *Registered Participants* into the *test program*;~~

~~(2) how *AEMO* sought to minimise the costs and operational impacts of the test; and~~

~~(3) whether the *system restart plan* the subject of the test operated consistently with the achievement of the *system restart standard* and the *AEMO power system security responsibilities* for an *electrical sub-network*.~~

~~(o)~~(t) Any report ~~published~~ by *AEMO* pursuant to clause 4.3.6(p) must not disclose *confidential information* except as permitted by the *Rules* or the *National Electricity Law*.

Alternative proposal for cost recovery provisions:

(m) A Test Participant (other than a *Transmission Network Service Provider*, *Distribution Network Service Provider* or *SRAS Provider*) who is required by *AEMO* to participate in a test under this clause paragraph (m) may, within 10 *business days* after the date of the test, submit a written claim to *AEMO* for compensation in respect of its direct costs incurred as a result of its participation in the test, where:

(1) direct costs include fuel costs and incremental operation and maintenance costs attributable to the specific circumstances related to the *plant's* operation during the test; and

(2) direct costs exclude claims for loss of revenue (including from the *market*), losses by third parties and opportunity costs;

and the claim must contain sufficient detail and supporting information to substantiate each component of direct costs claimed.

(n) *AEMO* must:

(1) if the total amount of all claims by Test Participants in relation to the same test is less than $100,000 and *AEMO* determines in its sole discretion that all such claims are reasonable, pay the amounts claimed; and

(2) otherwise, refer the claim to an independent expert to determine the claim and pay the amount determined by the independent expert.

(o) A referral of a claim by *AEMO* to an independent expert under paragraph (n)(2), and the determination of the independent expert must be consistent with the requirements of clause 3.12.3 except that, in applying that clause:

(1) each relevant Test Participant is taken to be a *Referred Directed Participant* and the test is taken to be an *AEMO intervention event*;

(2) references to *intervention settlement timetable* are taken to be replaced by a timetable established by *AEMO* in the independent expert's terms of appointment, with the objective of *publishing* the final determination within [20] weeks of the date of the referral;

(3) the independent expert must only apply the principles in paragraph (m) in determining compensation

(p) *AEMO* must recover the amount of any compensation paid under paragraph (n) from *Market Participants* in accordance with clause 3.15.6A(d) **[*Note: clause 3.15.6A(d) would then be amended such that SRPi includes the compensation amounts paid under this clause, allocated for each trading interval in the same way as a test payment would be under an SRAS agreement.*]**

[9] Clause 4.8.12 System restart plan and local black system procedures

Before clause 4.8.12(a), insert a new heading, "System restart plan".

[10] Clause 4.8.12 System restart plan and local black system procedures

Before clause 4.8.12(d), insert a new heading, "Local black system procedures".

[11] Clause 4.8.12 System restart plan and local black system procedures

In clause 4.8.12(f)(1), after "*system restart plan*;*"* omit "and".

[12] Clause 4.8.12 System restart plan and local black system procedures

After clause 4.8.12(f)(1), insert a new clause 4.8.12(f)(1A):

(1A) include any action the *Generator* or *Network Service Provider* may need to ~~must~~ take following any *major supply disruption* prior to *energisation* or *synchronisation* ~~to assist the safe implementation of the *system restart plan*~~; and

[13] Clause 4.8.12 System restart plan and local black system procedures

Before clause 4.8.12(j), insert a new heading, "Communication protocols".

[14] Clause 4.8.12 System restart plan and local black system procedures

Omit clause 4.8.12(j) and substitute:

(j) *AEMO* and *Network Service Providers* must jointly develop, and may jointly amend, written communication protocols to facilitate the exchange of all information relevant to the roles played by *AEMO*, *Network Service Providers*, *Generators*, *Customers* and other *Registered Participants* in the preparation and implementation of the *system restart plan*.

[15] Clause 4.8.12 System restart plan and local black system procedures

After clause 4.8.12(j), insert:

(k) The written communication protocols prepared under clause 4.8.12(j) must:

(1) specify the categories of information required to, and the timing and process by which information will, be exchanged between:

(i) *AEMO* and *Network Service Providers*, *SRAS Providers*, *Generators*, *Customers* and other *Registered Participants* as relevant, in order for *AEMO* to prepare and implement the *system restart plan* and for *AEMO* and the relevant parties to give effect to the *system restart plan*;

(ii) *Transmission Network Service Providers* and *Distribution Network Service Providers* and *Customers* connected to the *Transmission Network Service Provider's transmission network* regarding the nature of *connection point* and *load* characteristics;

(iii) *Network Service Providers* and *Generators* regarding *connection point* characteristics and the steps~~nature of switching~~ that may need to be conducted before or during the process of restoring the *power system*; and

(iv) *Distribution Network Service Providers* and parties connected to the *Distribution Network Service Provider's distribution network* regarding the nature of *connection point* and *load* characteristics.

(2) where the communication protocols prepared under clause 4.8.12(j) are constituted by a number of documents, be clearly identifiable as the communication protocols established under that clause.~~to be utilised during the restoration of the *power system* after a *major supply disruption*~~;

(3) where the communication protocols incorporate procedures or protocols in other documents, the document must be clearly identified and referenced and the circumstances under which those procedures or protocols are to be used in a *major supply disruption* must be clearly identified; and

~~(4) require that revisions or updates of the protocols are jointly developed and are documented.~~

(l) *AEMO* and *Network Service Providers*, *SRAS Providers*, *Generators*, *Customers* and other *Registered Participants* as relevant must take all reasonable steps to comply with the written communication protocols developed pursuant to clause 4.8.12(j).

(m) *AEMO* and *Network Service Providers*, *SRAS Providers*, *Generators*, *Customers* and other *Registered Participants* as relevant must comply with a reasonable request for information made by *AEMO* or a *Network Service Provider* pursuant to the written communication protocols prepared pursuant to clause 4.8.12(j).

[16] Chapter 10 Substituted Definitions

Substitute the following definitions in alphabetical order:

black start capability

A capability that allows a *generating unit* or other ~~,~~ *facilities* or ~~,~~ *plant* ~~or combination of *plant* and *facilities*~~, following *disconnection* from the *power system*, to be able to deliver electricity to either:

(a) a *connection point*; or

(b) a suitable point in the *network* from which *supply* can be made available to other *generating units*,

without taking *supply* from any part of the *power system* following *disconnection*.

system restart ancillary service or SRAS

A service provided by *plant* or *facilities* with:

(a) *black start capability*; or

(b) the capabilities described in the *SRAS Guideline* to supply one or more services to sustain the stable ~~energisation~~ *energisation* of *generation* and *transmission*,

sufficient to facilitate the restoration and maintenance of *power system security* and the restart of *generating units* following a *major supply disruption*.

test program

In respect of an *inter-network test* or a system restart test under clause 4.3.6, means the program and co-ordination arrangements for the test including (without limitation):

(1) test procedures;

(2) the proposed timing of the test;

(3) operation procedures to manage *power system security* during the test;

(4) required *power system* conditions for conducting the test;

(5) for an *inter-network test*, test facilitation services including, as necessary, *ancillary services* required to achieve those *power system* conditions;

(6) criteria for continuing or concluding a test and the decision-making process relevant to the test; and

(7) contingency arrangements.

Attachment to AEMO Submission on draft determination February 2020 - Suggested revisions to draft rule

Schedule 2 Savings and Transitional Amendment to the National Electricity Rules

(Clause 4)

[1] Chapter 11 Savings and Transitional Rules

In Chapter 11, insert a new Part ZZZ[X]:

Part ZZZ[X] System restart services, standards and testing

11.[XXX] Rules consequential on the making of the National Electricity Amendment (System restart services, standards and testing) Rule 2020

11.[xxx].1 Definitions

For the purposes of this rule 11.[xxx]:

Amending Rule means the National Electricity Amendment (System restart services, standards and testing) Rule 2020.

commencement date means the date of commencement of Schedule 1 of the Amending Rule.

new clause 4.3.6 means clause 4.3.6 of the *Rules* as will be in force immediately after the commencement date.

transitional date means the date of commencement of Schedule 2 of the Amending Rule.

11.[xxx].2 SRAS Guideline

(a) By ~~1~~ 2 November~~October~~ 2020, and in accordance with the *Rules consultation procedures*, *AEMO* must amend the *SRAS Guideline* to take into account the Amending Rule.

(b) If, prior to the transitional date~~1 October 2020~~ and for the purposes of amending the *SRAS Guideline* in anticipation of the Amending Rule, *AEMO* undertook consultation or a step equivalent to that required in the *Rules consultation procedures*, then that consultation or step is taken to satisfy the equivalent consultation or step under the *Rules consultation procedures*.

11.[xxx].3 System restart standard

(a) As soon as practicable after the transitional~~commencement~~ date, and in accordance with the consultation requirements in clause 8.8.3, the *Reliability Panel* must update the *system restart standard* to take into account the Amending Rule.

(b) On and from the commencement date and until such time as the

system restart standard is updated in accordance with paragraph (a), the *system restart standard* is to be interpreted as if it applied to *system restart ancillary services* as defined under the Amending Rule.

11.[xxx].4 Communication protocols

By [30 April 2021], and in accordance with the *Rules consultation procedures*, *AEMO* and *Network Service Providers* must jointly update the communication protocols prepared under clause 4.8.12(j) to take into account the Amending Rule.

11.[xxx].5 System restart tests

(a) If, prior to the commencement date:

(1) AEMO and a Transmission Network Service Provider agreed to conduct a test of a kind contemplated by new clause 4.3.6; and

(2) the date of that test is after the transitional date,

new clause 4.3.6 is taken to apply in respect of that test as modified in accordance with this clause 11.[xxx].5.

(b) Steps taken by agreement of *AEMO* and the Test Participants in planning the test are taken to have satisfied the applicable requirements of new clause 4.3.6(b) to (h) for the corresponding steps.

(c) Any test planning steps initiated after the transitional date must meet the applicable requirements of new clause 4.3.6(b) to (h) except as otherwise agreed by *AEMO* and the Test Participants.

(d) Paragraphs (i) to (s) of new clause 4.3.6 apply in respect of the test.