

*System restart ancillary
services (SRAS) Rules
change proposals*
– Response to comment on
AEMC consultation

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Context of NEMMCO's response to comments

Infrastructure and services that facilitate restoration of the power system following a major supply disruption play a fundamentally important role, in that they help avoid the substantial economic costs that would emerge should the power system fail to be restored to full functionality in a timely manner.

The value (or avoided economic costs) of restart services is inherently difficult to estimate as discussed in Section 1.3 of NEMMCO's **SRAS review Final report** – NEMMCO maintains that the "correct" amount to pay for a marginal *restart service* is impossible to determine. It therefore follows that there is no "correct" amount of service to procure.

Accordingly, any determination of either the number of services or remuneration for those services involves elements of technical and social judgement for which there is no right answer. In the absence of any "correct" approach, the best way forward is to establish suitable standards and guidelines that reasonably proscribe the level of discretion that will need to be exercised.

Transparent and consultative processes should be followed in both the establishment and exercise of such standards and guidelines. Parties with appropriate expertise and independence should be charged with the responsibilities to establish relevant elements. In identifying the appropriate parties to establish relevant standards and guidelines, NEMMCO's **Proposal for SRAS Rule changes** reflect the following principles:

1. In respect of broad standards, the Reliability Panel is best placed to determine outcomes, but as with existing *power system security and reliability standards*, NEMMCO is well placed to provide technical advice. The Reliability Panel would be able to consult widely in its determination of a standard notwithstanding any advice provided to it by NEMMCO.
2. Where technical detail must be specified beyond the broad standards, NEMMCO, in consultation with TNSPs and plant operators, is the party best qualified to determine that technical detail. However, to the extent practicable such technical detail must be subject to Rules consultation procedures.
3. Where there is a need to establish proxies of the value the community might place on having flexible arrangements, a policy linked body like the AEMC is best placed to establish those values.
4. Where dispute arises on the appropriateness of contractual terms, existing dispute mechanisms should be followed.

It is accepted that the manner in which NEMMCO seeks to give effect to these principles might not be universally agreed, and it is possible that some of the principles themselves may be questioned by some parties. Nevertheless, consistent with these principles, NEMMCO has undertaken a comprehensive and open consultative process in an effort to deliver technically sound and socially balanced proposals for managing *system restart ancillary services*.

1 NEMMCO's role in developing and applying the standard

Introductory comment

As the independent market and system operator, NEMMCO is ideally placed to provide independent and expert advice in matters relating to maintaining power system security.

Given the apparent support for an outcomes-based *system restart service standard*, NEMMCO proposes to ensure the standard has an outcome focus by placing very limited, high level, guidance in the Rules as to how that standard should be determined. Consistent with *Principle 1* outlined in the *Context* Section of this **Response to comments**, the proposed Rules place the obligation to determine the standard with the Reliability Panel – noting that a standard so determined can never be “correct”, given the impossibility of accurately determining the value of any individual restart service¹.

Where a clear standard and appropriate accompanying guidance exist, there is a benchmark by which to guide efficient investment in, and efficient use of, electricity services for the long term interests of consumers of electricity.

Even with judicious application of agreed guidelines, variations in power system topology and technology – as well as jurisdictional policies – make it impossible to guarantee equitable implementation of a single standard, and (potentially substantial) variations in actual capability and cost will inevitably arise. Variations of the nature should be acknowledged and catered for.

Comment from respondents to consultation

Comment from respondents with respect to developing and applying the standard was in two areas:

- Determining the *system restart service standard*
 - NGF (p.6) and Snowy Hydro (p.3) each express concern as to the prescriptive nature of the *system restart service standard* and a belief that the Reliability Panel should be given complete independence to determine that standard.
 - ERAA (p.2) supports the role of the Reliability Panel in determining the *system restart service standard* but, along with Snowy Hydro (p.3), questions the role of NEMMCO's advice in that process.
- Consistency in applying the standard
 - NGF (pp.6, 7) and ERAA (p.1) each suggest that NEMMCO, TNSPs and jurisdiction planning bodies (JPBs) have inappropriate discretion to exceed the standard.

¹ See the discussion in Section 1.3 of NEMMCO's **SRAS review Final Report**.

NEMMCO response to comments

1.1 ***Determining the system restart service standard***

The form of the standard must be such that NEMMCO is able to model procurement options and likely restoration outcomes based on those options. An outcome-based standard that does not facilitate effective modelling of outcomes prior to decisions being made as to which services are to be procured is of little value. Beyond specifying a requirement in the *system restart service standard* for a “supply capability” percentage “within a specified number of hours” the standard is non-prescriptive. NEMMCO considered that was the minimum level of prescription necessary to support an outcomes-based standard – capable of informing procurement processes – that was popularly supported in consultations associated with the conduct of the SRAS review.

The fact that the proposed Rules require the Panel to determine the standard on the advice of NEMMCO, reflects the existing requirement that the *power system security and reliability standards* – of which a *system restart service standard* is arguably a component under the existing Rules – are also to be determined by the Reliability Panel on the advice of NEMMCO. There is nothing in the proposed Rules that would prevent the Reliability Panel to consult widely on the precise form of the standard notwithstanding any advice provided to it by NEMMCO.

1.2 ***Consistency in applying the standard***

JPBs and TNSPs have no role in the procurement process outside of being consulted by NEMMCO on *electrical sub-network* boundaries². NEMMCO would only be able to procure services in addition to the number necessary to meet the *system restart service standard* where an explicit amount has been determined by the AEMC (in consultation with relevant Ministers) for this purpose.

Proposed clause 3.11.4A(c)(2) provides for NEMMCO to determine guidelines – that would be subject to Rules consultation procedures – for making use of any *additional secondary service allowance* in a transparent and consistent manner.

² See also discussion in Section 4.3 of this **Response to comments**, *Consistency of technical specifications and guidelines*.

2 Addressing non-competitive situations

Introductory comment

It is appropriate for the Rules to provide a negotiation process to agree reasonable terms and conditions, and a dispute process should negotiations fail – as they do now – but the Rules must provide some guidance as to the interpretation of reasonable terms and conditions. Guidance as to what might constitute reasonable terms and conditions would serve as a protection for both tenderers and NEMMCO to ensure balanced outcomes in light of competing objectives:

- the objective of tenderers to maximise returns to shareholders; and
- the objective of NEMMCO to prudently manage the power system and delivering on an obligation to minimise, to the extent practicable, the cost of procuring ancillary services.

Where competitive disciplines are absent from a market, there is a likelihood that prices to deliver services to that market will fail to reflect the reasonable opportunity costs of delivery of such a service. It is only when prices reflect true opportunity costs that allocatively efficient outcomes are likely to be achieved. “Efficient prices” would mitigate any tendency to either under- or over-invest in facilities and, hence, promote efficient use of and efficient investment in such facilities.

Given the fundamentally important nature of restart services to the security of the power system, and the risks to the community (damage to the long term interests of consumers of electricity) that could follow failure to have appropriate contracts in place, the timeliness of dispute resolution needs to be appropriately managed. Further, some balance must be found between:

- providing tenderers with a reasonable opportunity to walk away; and
- ensuring the integrity of the power system by having SRAS contracts in place in a timely manner.

Where competitive disciplines are muted and parties with commercial opportunities are able (for a short period) to sustain prices substantially in excess of long run marginal costs, the resultant economic outcome is a wealth transfer. Provided the burden of that wealth transfer is widely spread among small consumers, it is arguable whether there is any material efficiency loss. However, if the wealth transfer becomes a de facto tax on business, business efficiency is clearly impacted.

Comment from respondents to consultation

Comment from respondents with respect to addressing non-competitive situations was in six areas:

- Assumption of monopoly
 - NGF (p.3), Snowy Hydro (p.1,2), and MacGen (Section 4.1) each suggest there is an (implied) assumption in the proposed Rules changes that SRAS is a (natural) monopoly.

- Snowy Hydro (p.2) and CS Energy (p.2) each make observations regarding the value of extending the time frames for assessment and service delivery.
- Cost-based price outcomes
 - CS Energy (p.2) suggests NEMMCO sets the price for SRAS services and MacGen (Section 2.2) submits that proposed clauses effectively make NEMMCO and the dispute advisor responsible for quasi-regulation of SRAS remuneration. MacGen also questions the legitimacy of the Rules dispute process in having a role in determining the price to be applied to tendered *restart services*.
 - MacGen (Section 5) and NGF (p.4) suggest the proposed guidance regarding tender terms and conditions still leaves room for uncertainty.
 - Snowy Hydro (p.3) suggests that where there are insufficient services to meet the standard there should be independent assessment of remuneration for services.
 - NGF (p.4) suggests that allocating a cost-based return will destroy and pervert efficient market-based incentives. The NGF (p.5) also asserts that the proposed dispute process is heavily biased in NEMMCO's favour.
 - NGF (pp.4-5) considers the approach proposed by NEMMCO contradicts several market design principles.
- Opportunity to walk away
 - NGF (p.5) expresses concern that the price for providing a service only becomes known after it has been required to guarantee delivery.
 - Snowy Hydro (p.5) expresses concern about an inherent risk of being mandated to deliver a service.
 - CS Energy (p.1) suggests that a tenderer must be permitted to withdraw at any point up to an agreement being executed.
- Incentive to refrain from tendering
 - MacGen (Section 4.2.2), NGF (p.2), Snowy Hydro (p.5) and CS Energy (p.1) each suggest the proposed arrangements create incentives for prospective service providers to refrain from tendering.
- Difficulties in negotiation
 - MacGen (Section 4.2.1) suggests that the discovery process contemplated by NEMMCO's proposals is heavy-handed and costly.
 - Snowy Hydro (p.4) suggests that 5 business days is not sufficient time in which to gather cost information in support of a tendered price.

- NGF (p.3) expresses concern regarding the intrusiveness of the proposed tender clarification process.
- Alternative payment methodologies
 - MacGen (Sections 6.1 and 6.2) proposes two alternative pricing methodologies – “splitting the benefits” and “pool of money” – to the arrangements proposed in the Rule change.

NEMMCO response to comments

2.1 *Assumption of monopoly*

With respect to the competitiveness of the SRAS market, NEMMCO is encouraged by the NGF observation that:

All existing and new non-wind power stations can be equipped to provide this service by installing auxiliary generation. For hydro and gas-turbines the installation cost and timeframes tend to be modest.

However, NEMMCO’s experience of SRAS tender processes is that the number of conforming tenders is often not sufficient to deem the process “competitive” in accordance with the existing definition in clause 3.11.5(d1) of the Rules that states (in part):

A tender will be deemed to be a competitive tender for a particular *non-market ancillary service* if the required quantity of that *non-market ancillary service* determined in accordance with clause 3.11.3 **can be supplied from the conforming offers** received by NEMMCO with any one conforming offer discarded or all conforming offers from any one party discarded. ... [emphasis added].

Contrary to the assertions of NGF, Snowy Hydro and MacGen, there is no assumption in either **The Allen Consulting Group report**³ or NEMMCO’s **SRAS review Final report** that *restart services* are a (natural) monopoly. The decision to not limit application of clause 3.11.5C is based on expert economic advice that states:

While the existing threshold for triggering good faith negotiations is sufficient to ensure contract outcomes aligned with reasonable terms and conditions in *some* cases it is insufficient to ensure these outcomes in *all* circumstances.⁴

Depending on the system recovery threshold at which an outcome-based standard is set, the requirements for SRAS to meet the standard may increase (at least initially) beyond the ability for the market to deliver, even if additional tenderers emerge. The objective of NEMMCO in recommending extension of lead times in the tendering process is to reduce barriers to entry to the SRAS market and encourage additional tenderers, although there can be no guarantees that truly competitive outcomes will necessarily follow.

³ See *The Allen Consulting Group, Guidelines for dealing with non-competitive tenders for System Restart Ancillary Services in the NEM*, February 2004. This paper is available from <http://www.nemmco.com.au>.

⁴ See Section 6.4 “Conclusions”, p.27 of *The Allen Consulting Group report*, *ibid*.

NEMMCO interprets CS Energy's comments as supportive of NEMMCO's recommendations on the standard tendering cycle as outlined in Section 2.3.4 of NEMMCO's **SRAS review Final report**.

2.2 **Cost-based price outcomes**

MacGen characterises the proposed Rules changes as regulating price outcomes, yet claim the guidelines proposed in clause 3.11.5C leave room for uncertainty. Regulation of price would suggest the mandating of specific price outcomes, although the proposed Rules merely provide guidance on an appropriate methodology to be applied should that prove necessary to finalise a contract. MacGen and the NGF seem to adopt a position that, on the one hand, there is too much intervention (read: "regulation") of outcomes, yet also believe the guidance provided is not sufficiently specific to provide certainty of outcomes. Either the Rules are regulating prices or they are not. In NEMMCO's submission, guidance does not equate to prescriptive regulation.

NEMMCO has presumed that the MCE (and the market as a whole) would not want NEMMCO to enter into contracts that reflect unreasonable terms and conditions. NEMMCO should be prepared to pay for efficiently provided actual capability. NEMMCO should not be required to pay for either; inefficient provision of appropriate services; or avoidable over-servicing.

Achieving economically efficient outcomes relies on prices paid for a service to reflect the opportunity costs of (efficiently) providing that service. Where there is substantial disconnect between prices and the opportunity cost of providing a service, allocatively inefficient outcomes (to the detriment of the long-term interests of consumers of electricity) are likely to ensue.

The existing Rules [clause 3.11.5(d1)] already contemplate the need for good faith negotiation to agree reasonable terms and conditions where there is a lack of competition for *system restart ancillary services* and state (in part):

If a tender process is not deemed to be a competitive tender ... then *NEMMCO* and ... *Registered Participants* ... **must negotiate in good faith to agree reasonable terms and conditions** ... [emphasis added]

However, the existing Rule provides no guidance to either the tenderer or NEMMCO as to what might constitute "reasonable". NEMMCO obtained expert economic assistance to develop some principles by which "reasonable" could be assessed. The proposed Rules reflect that expert advice.

NEMMCO accepts that an individual's perspective of reasonable, in the absence of any guidance, will vary between short-run marginal costs at one extreme, and community value (or willingness to pay⁵) at the other extreme. The proposed Rules seek to give an indication of where between those extremes "reasonable" might lie. Real non-insurable risks – with the exception of risks arising from bad faith nor negligent actions – are legitimate costs to include.

Under the existing Rules, where "a tender process is not deemed to be a competitive tender" negotiation cannot guarantee agreement, and outcomes might be determined by a dispute advisor, but they do not provide any

⁵ See Sections 2.6 and 5.1 for further discussion on the concept of "willingness to pay" as a benchmark for remuneration.

guidance to a dispute advisor as to what might constitute “reasonable”. The proposed Rules seek to ensure the same guidance on reasonable terms and conditions as would apply to both a tenderer and NEMMCO, would also apply to the dispute advisor.

NEMMCO is not seeking to give any party powers that are additional to those already available in the Rules with respect to the resolution of a dispute. NEMMCO merely seeks to have the Rules provide some guidance as to how existing powers should be exercised. Clause 8.2.1(a)(2) clearly provides for dispute resolution guiding principles to apply in circumstances where NEMMCO and tenderers:

[fail] to reach agreement on a matter where the *Rules* require agreement or require the *Registered Participants* to negotiate in good faith with a view to reaching agreement.

NEMMCO would not impose a price and, therefore, would not be a price regulator as is suggested by MacGen. NEMMCO would merely use its experience to identify when tendered prices are likely to reflect unreasonable terms and conditions. The price – if the tender is referred to a dispute process, following ample opportunity for tenderers to withdraw their offers – would be determined by an independent umpire. No party would have to accept a price below the cost of providing a service (including legitimate allowance for risk) if it is able to demonstrate the reality of those costs to an independent umpire (should the process be taken to that point). Such an approach is entirely consistent with Snowy Hydro’s suggestion that:

NEMMCO should encourage competition for these services in the first instance, and **in the event that there are insufficient services to meet the SRAS standard, there needs to be an independent assessment of remuneration for services** ... [emphasis added]

Unlike Snowy Hydro or MacGen, NEMMCO would not characterise this as a “regulated” approach.

NEMMCO does not agree with the NGF’s assertion that the proposed dispute process is heavily biased in NEMMCO’s favour. No party is compelled to tender, and every tenderer is provided ample opportunity to walk away⁶.

NEMMCO’s response to the NGF claims that the proposed Rules changes contradict several market design principles are, in respect of each relevant (paraphrased) principle:

- **(a)(1) minimisation of NEMMCO decision making** – NEMMCO makes decisions only with respect to forming a judgement as to whether submitted tenders may reflect unreasonable terms and conditions. If good faith negotiations fail to satisfy NEMMCO as to the reasonableness of the tender and the service in question is required to satisfy power system security requirements, then NEMMCO may refer the tender to a dispute adviser for determination.
- **(a)(2) maximum level of market transparency** – NEMMCO does not impose prices on providers. Based on the details provided by the NGF,

⁶ See Section 2.3, *Opportunity to walk away*.

NEMMCO is not able to understand how transparency and market efficiency is adversely affected by the proposed Rules.

- **(a)(3) avoidance of special treatment in respect of different technologies** – NEMMCO cannot see how application of a common set of principles to a (possible) range of circumstances equates to “special treatment in respect of different technologies”.
- **(a)(6) ancillary services should be acquired through competitive market arrangements** – if effective competition is demonstrably absent, NEMMCO considers it has an obligation on behalf of the market to avoid entering contracts on the basis of unreasonable terms and conditions.

2.3 **Opportunity to walk away**

As indicated in Attachment 2 to NEMMCO’s **Proposal for SRAS Rule changes**, there comes a point in the SRAS tendering process at which NEMMCO (on behalf of the market) cannot afford to have remaining tenderers ‘walk away’, an outcome that:

may create unacceptable levels of uncertainty in, and potentially undermine, the procurement process at the cost of significant time and expenditure

For this reason, NEMMCO seeks to commit both NEMMCO and the preferred tenderer to a contract without knowing what the final contract price might be – when the dispute process is invoked, neither NEMMCO nor the tenderer can avoid entering into a contract. However, tenderers have previously had substantial opportunity (at least 6 weeks) to walk away⁷. NEMMCO believes the opportunity to walk away from the tender process is more than adequate, and does not agree that the proposal creates a barrier to entry, as suggested by CS Energy.

NEMMCO understands that the dispute process may determine a price that is some way from the price NEMMCO suspected to be reasonable, but NEMMCO would accept the independent umpire’s decision.

2.4 **Incentive to refrain from tendering**

Insofar as there may be “perverse incentives” for prospective service providers to refrain from tendering (or even not invest in appropriate facilities), incentive to participate in a tender is provided by “reasonable” remuneration for availability of a *restart service* – this availability payment is guaranteed revenue (subject to adequate maintenance and testing of the *restart service*).

MacGen suggests that awaiting direction to invoke *restart service* capability may be a viable alternative to contracting for *restart services*. NEMMCO does not believe that relying on direction for *restart services* as a sole means of restoring the power system is a tenable position to be in.

The approach being proposed by MacGen discounts the value of a guaranteed “availability” payment that would be made to all contracted

⁷ It should be noted that the proposed Rules changes ensure that the dispute process cannot be invoked until the later of 30 business days after the closing date of tenders [clause 3.11.5D] and 20 business days after the issue of a *NMAS notice of clarification* [see clause 3.11.5E(a)].

tenderers regardless of whether or not the contracted *restart service* is actually called upon. The economic consequences of available services being inadequate to ensure timely restoration of the power system are too great to rely on directions as a means of recovery from a *major supply disruption*.

Further, the proposed arrangements specifically contemplate a separate “usage” payment in addition to the availability payment should the service be called upon and the provider successfully delivers its contracted capability. Note that NEMMCO’s **SRAS review Final report** described [Section 2.7.1] the various components of *restart service* payments and indicated the following: “*service usage – payment for the costs incurred in the restart process itself over and above normal plant operation*”⁸.

In the absence of precedent, it is difficult to estimate the payment that would be received if a suitable generating unit was not contracted but was, instead, “directed” to provide *restart services*. If NEMMCO’s proposals for modified *SRAS* arrangements were accepted, and there was a *major supply disruption* that warranted NEMMCO calling upon *SRAS contracts*, and *restart services* were successfully delivered, the total remuneration received in respect of providing *SRAS* would be:

- “availability” payments received on an on-going basis for term of the *SRAS* contract regardless of whether or not the service was ever called upon; plus
- “usage” payments per the *SRAS* contract; plus
- payment for any energy delivered to the market in the process of starting target generating units or supporting load during system restoration at the prevailing market price – as would be the case under existing arrangements.

If during a *major supply disruption* the market price was in fact set at VoLL (\$10,000 / MWh), any *SRAS* provider would be paid for metered energy during the restoration process at the prevailing market price. As an “*SRAS usage payment*” is in addition to metered energy payments, the (additional) opportunity cost of providing a *restart service* is fully reflected by:

- fuel costs that are not recovered by energy payments;
- extra wear and tear on plant and equipment; and
- the cost of other resources used to facilitate the *restart service*.

Therefore, any contracted *SRAS* provider would receive “*the ‘fair payment’ price ... equated to what the market price would have been if the market were operating normally*” as MacGen suggests is appropriate. NEMMCO is unable to readily identify any remuneration shortfall between payment under a *SRAS* contract compared to payment following direction. In fact, it appears likely that total payments under an *SRAS* contract would exceed the alternative

⁸ One of the legitimate costs to consider here might be an estimate of any shortfall between a) the value of fuel used during the process of assisting to restore the power system; and b) payment for that fuel as reflected by the prevailing market price at the time the *SRAS* contract was called upon.

payments that may be made following a direction, with the difference being the on-going availability component.

2.5 ***Difficulties in negotiation***

NEMMCO's experience of "good faith negotiations" is that information sufficient to adequately inform negotiations is generally not forthcoming from tenderers. Given the need to have dependable *restart services* in place in order to effectively manage the security of the power system, NEMMCO believes that some form of requirement to adequately inform the negotiation process – within a reasonable time frame – is appropriate. The cost of engaging in such a process is largely a function of the openness and degree of cooperation displayed by tenderers.

As a result of NEMMCO's experience in conducting SRAS tenders since market start, NEMMCO has accumulated a substantial understanding of the prices and costs incurred by various restart technologies. Based on this experience and understanding, NEMMCO believes it is in a sound position to gauge whether or not the prices offered by a tenderer are within the ballpark of reasonably efficiently incurred costs.

NEMMCO understands the risks associated with invoking dispute processes and would not do so lightly. The formal negotiation process contemplated by proposed clause 3.11.5C would be invoked only when NEMMCO believed it was being placed in a position of having to procure *restart services* on the basis of unreasonable terms and conditions.

NEMMCO believes that where a tenderer submits an offer to provide a service in a competitive market, the tenderer cannot afford to do so without having taken sufficient care to ensure the offer is competitively priced. In such circumstances, a competitively priced offer would take account of the costs incurred in efficiently delivering the required service. Accordingly, in a competitive market, all relevant costing information should already have been prepared by tenderers.

If NEMMCO has sufficient reason to believe a tender reflects unreasonable terms and conditions – that is, competitive disciplines seem to be absent – the nature of the information NEMMCO seeks is merely information that would already be available to the tenderer if competitive disciplines were present. The proposed Rules changes clearly indicate [at clause 3.11.5D] that such information would be treated as confidential.

The objective of the *NMAS notice of clarification* is to elicit information in circumstances where NEMMCO is unable to reasonably reconcile its stated requirements, knowledge and benchmarks for service with the terms and conditions offered by tenderers. NEMMCO understands that such a process might be considered intrusive and would therefore only exercise it where absolutely necessary to protect the broader interests of the market.

2.6 ***Alternative payment methodologies***

As discussed in Section 1.3 of NEMMCO's **SRAS review Final report**, it is impossible to objectively determine the value of – and hence any willingness to pay for – a marginal *restart service*. Further, NEMMCO does not accept that the maximum willingness to pay is any rational basis on which assess reasonable remuneration for a *restart service*.

Willingness to pay for availability of a service would be assessed by a business very differently depending on the point in the business cycle at which that question was asked. Consider the following example:

A fully productive \$1 billion smelter is placed in a position where it unexpectedly loses electrical supply. In such circumstances its willingness to pay for a restart service **that would otherwise be unavailable at that time** would be in the order of several \$100 million in order to avoid having to write off its \$1 billion investment. However, if before the smelter was constructed the project manager was asked: “How much would you be prepared to pay for an insurance policy (an added cost of business) that guarantees restoration of electrical supply within a given time frame?”, the answer is likely to be substantially less than \$100 million.

Willingness to pay cannot be a rational measure of reasonable price for a restart service. A substantial added expense incurred to pay a price for a service well in excess of the marginal cost of supply is, in effect, a tax and a drag on the efficiency of business.

In proposing willingness to pay as a form of benchmark price under the “splitting the benefits” heading, MacGen notes:

... to convert these values to contracted SRAS remuneration levels would involve allowing for the expected probability of a system black or major supply disruption and the expected period of duration and quantity of the service that would be required.⁹

MacGen, however, fails to demonstrate how practical effect can be given to the acknowledged requirement to quantify important parameters. As noted previously¹⁰ the inability to accurately quantify such parameters makes it impossible to place an objective value (as opposed to cost or price) on any specific *restart service*.

The “pool of money” concept has previously been canvassed with NEMMCO by MacGen. In the **SRAS review Final report** it was indicated that:

... [NEMMCO] notes the criticism from MacGen for failing to explicitly respond to their proposal to provide a separate fund to reward any participant that contributed successfully to system restoration. As subsequently discussed with MacGen, this matter was nevertheless considered in some detail prior to releasing the **Draft report**. NEMMCO is of the view that generators are unlikely to maintain (additional) black start capability on the off-chance that they could share in the proceeds of such a fund. Such an arrangement would also necessitate the direct involvement of jurisdictions in the process – as previously discussed, interest in such involvement has not been communicated by jurisdictions to NEMMCO. The arrangement would also tie up substantial amounts of Market Participants’ capital in perpetuity.¹¹

⁹ See MacGen’s submission Section 6.1, 5th para.

¹⁰ See the *Introductory comment* to Section 1 of this **Response to comments** and the discussion in Section 1.3 of NEMMCO’s **SRAS review Final Report**.

¹¹ See Appendix 1, Section A1.7.1.

3 Locational variations

Introductory comment

NEMMCO would not determine the *system restart services standard* – this would be a task assigned to the Reliability Panel – but NEMMCO is aware of expressions from various parties that locational variation in the standard is desirable. NEMMCO does not, and should not, take a view on the appropriateness or otherwise of regional variation in standards that may arise for social policy reasons. Nevertheless, NEMMCO considers it prudent for proposed Rules changes to cater for the possibility of locational variation in the standard by:

- ensuring the proposed Rules are amenable to effectively dealing with locational variations in the *system restart services standard*; and
- allowing for locational recovery of SRAS costs to address financial equity and allocative efficiency concerns given:
 - the high likelihood of locational cost variations if there are locational variations in the standard;
 - the probability of locational cost and procured recovery capability differences arising even if there is a single NEM-wide *system restart services standard*.

Economically efficient outcomes are all about paying no less than the incremental cost of a service. Where cross-subsidies between regions are apparent, at least one region is failing to pay the incremental cost of the service procured on its behalf – the more substantial the cross-subsidy, the more inefficient the outcome.

Comment from respondents to consultation

Comment from respondents with respect to locational variations was in four areas:

- Variation in system restart service standards
 - ERAA (p.2) expresses a wish to have a single NEM-wide *system restart service standard*.
- Regional recovery of SRAS costs
 - NGF (p.8) suggests only customers benefit from marginal increases in the number of providers.
 - NGF (pp.8-9) and Snowy Hydro (p.5-7) suggest regional recovery leads to complications in implementation and distortion of market signals.
 - ERAA (p.3) expresses concern about the complexity of regional recovery arrangements.

- Assisting recovery of a sub-network to which SRAS is not assigned
 - Snowy Hydro (p.5) believes there is a probability that SRAS from another sub-network could and would assist in the restoration of a single electrical sub-network.
- Failure of tender process to deliver adequate services in a specific area
 - MacGen (Section 4.3) infers from proposed Rule changes that NEMMCO could develop its own SRAS assets, and expresses concern about inefficiencies that could be created by specifically targeted SRAS tenders.

NEMMCO response to comments

3.1 *Variation in system restart service standards*

Through the course of the SRAS review, NEMMCO received separate submissions from two TNSPs and one generator indicating a need for direct jurisdictional involvement in establishing the system restart service standard. Subsequent to the completion of the review, and prior to NEMMCO submitting formal (then) Code change proposals, NEMMCO received representations from one jurisdictional energy minister wanting NEMMCO to contract with additional restart services in that jurisdiction.

Whether or not a standard should differ between jurisdictions is a policy matter to be determined by parties other than NEMMCO. In recognition of the possibility of the *system restart service standard* differing from jurisdiction-to-jurisdiction, NEMMCO proposes the Rules do not preclude that outcome¹².

3.2 *Regional recovery of SRAS costs*

Should there be any significant differences between areas of the power system in the level of contracted restart capability arising because of either:

- variations between areas of the power system in the system restart service standard; or
- variations in NEMMCO's availability (and cost) of additional secondary services procured through use of the *additional secondary service allowance*,

it is highly likely that substantial differences will arise in the cost of SRAS as procured for each electrical sub-network. In such circumstances, financial equity concerns would arise¹³ as well as potential allocative inefficiency consequences¹⁴ if SRAS costs continued to be smeared across the market.

There is no perfect cost recovery mechanism, although NEMMCO believes that equity and allocative efficiency issues arising from current arrangements

¹² See also Section 5.2, *Purpose of additional secondary service allowance*.

¹³ As noted in Attachment 2 to NEMMCO's **Proposal for SRAS Rule changes**.

¹⁴ Where the costs of facility are not signalled to parties that may rely on the facility, the prospects of over- or under-investment can rise.

ought to be addressed, and there is precedent for regional recovery of ancillary services costs.

If regional SRAS cost recovery (as proposed) was applied, cost allocations would only differ materially between generators and customers located in different areas of the market if there are substantial differences between areas in the prices paid for SRAS – and NEMMCO is proposing mechanisms to ensure that such differences reflect real technological costs. The approach being proposed by NEMMCO is consistent with the market design principles in clause 3.1.4(a)(8) that states:

...where arrangements require participants to pay a proportion of NEMMCO costs for *ancillary services*, charges should where possible be allocated to provide incentives to lower overall costs of the national electricity market.

NEMMCO does not believe the proposed process for regionalising SRAS cost recovery “*is necessarily complex, resulting in increased NEMMCO setup and audit costs and participant settlement verification costs*” as suggested by ERAA. If allocating costs by region rather than by jurisdiction is considered problematic, the same principles could be used to allocate costs by jurisdiction if different standards were applied on a jurisdiction-by-jurisdiction basis.

Contrary to Snowy Hydro’s suggestion, the balance of generation and load within a region or *electrical sub-network* would not create any substantive imbalance between generators and retailers in the allocation of SRAS costs¹⁵.

3.3 **Assisting recovery of areas to which SRAS is not assigned**

As noted in Attachment 2 to NEMMCO’s **Proposal for SRAS Rule changes**:

A regional basis for recovery of SRAS costs reflects NEMMCO’s amended view that ... there is only a limited prospect that a *restart service* procured for duty in one *electrical sub-network* would be used on its own to assist with restoration of a sub-network to which it has not been specifically assigned, thereby diminishing the strength of the case for sharing the restart procurement costs across the whole market ...

Accordingly, NEMMCO does not agree with Snowy Hydro’s assessment that “*on balance, the probability is that SRAS from another sub-network could and would assist in the restoration of a single electrical sub-network.*” Provision of support for restoration of a neighbouring region – where a service has not been specifically procured for that purpose – is likely to arise when one sub-network has already been (partially) restored, and it is the entire sub-network, not an individual SRAS source, that is providing the restoration capability.

3.4 **Failure of tender process to deliver adequate services**

If NEMMCO conducts a tender process and adequate restart services are not forthcoming for a specific *electrical sub-network*, NEMMCO would not own any facility subsequently constructed as a result of invoking the provisions of clause 3.11.5H. NEMMCO would merely have a contractual arrangement with

¹⁵ NEMMCO has constructed some examples to demonstrate this point and would be happy to provide those examples to any interested party. NEMMCO has not changed its views from those expressed in the **SRAS review Final report** on the appropriate split of SRAS costs between generators and customers (see Section 2.7.3, p.57).

the facility owner to provide *restart services*. Such facilities would only be sought after NEMMCO has consulted with relevant Ministers to make them aware of the consequences of not being able to meet the *system restart service standard*.

With respect to the inefficiencies MacGen is concerned about being created, it seems to be a straight trade-off between two options:

- A) meeting the *system restart service standard* and accepting the cost of:
- installing and maintaining (new) specifically ‘tendered for’ facilities and
 - possible distortions to the energy market created by new generation capability, where such generation capability is not an economic proposition on the basis of energy market considerations alone; or
- B) **not** meeting the *system restart service standard* and accepting on-going risk that:
- recovery from a *major supply disruption* could be delayed; and
 - consequential (and substantial) economic costs could thereby arise.

In NEMMCO’s view, it seems likely that the costs of option A) would be substantially less than the costs of option B).

4 Technical specifications: descriptions and guidelines

Comment from respondents to consultation

Comment from respondents with respect to technical specifications: descriptions and guidelines was in four areas:

- Definitions of primary and secondary restart services
 - MacGen (Section 5), Snowy Hydro (p.3) and NGF (p.7) each claim there is inappropriate vagueness regarding the specification of the reliability of primary and secondary restart services.
- Development of technical detail of restart services
 - MacGen (Section 3) expresses concern that proposed mechanisms for development and publication of *restart service* technical characteristics may result in inappropriate specification of SRAS requirements.
- Consistency of technical specifications and guidelines
 - MacGen (Section 5) expresses concern that the range of documentation necessary to support new arrangements could lead to inconsistency and uncertainty.
 - ERAA (p.2) suggests the Reliability Panel, rather than NEMMCO, should determine electrical sub-network boundaries.
- Proposed new / revised definitions of key terms
 - Powerlink Qld (pp.2-4) suggests alternative treatment / definition of several key terms.

NEMMCO response to comments

4.1 *Definitions of primary and secondary restart services*

It is suggested by some respondents that the reliability requirements for *primary restart services* and *secondary restart services* – as proposed by NEMMCO for Rules Glossary definitions – are vague and uncertain, and terms more definitive than “highly likely” and “more likely than not” should be used.

The Snowy Hydro suggestion for an alternative approach to establishment of targets for availability and reliability relies on objective measurement of key parameters and, in NEMMCO’s view, does not lend itself to practical implementation. The Snowy Hydro approach presumes two things:

1. reliability, and hence value, of a service can be objectively assessed;
and

2. it is possible to identify an appropriate performance threshold (a single aggregated score derived from a range of assessment criteria¹⁶) such that:
- services rated as exceeding the designated threshold are worth purchasing; and
 - services rated as failing to reach the designated threshold are not worth purchasing.

In response to a very similar suggestion put to NEMMCO during consultation on the SRAS review, NEMMCO expressed a view in the **SRAS review Final report**¹⁷ that:

presuming either of these two things is only ever likely to lead to a solution that is “precisely wrong” given:

- assessment of service reliability is likely to be subjective; and
- creating a ‘one size fits all’ contract ignores the distinction between services with very different levels of dependability, and thus difficulties will emerge in developing a consistent approach to assessing the relative merits of alternative services.

In discussions prior to preparation of the **SRAS review Final report**, NEMMCO invited Snowy Hydro to provide documentation of viable approaches to establishing service reliability. As yet, such documentation has not been forthcoming.

Contrary to the suggestion by the NGF that NEMMCO would have “*unlimited flexibility in determining the categories of primary and secondary*”¹⁸ restart services, service descriptions will be subject to Rules consultation procedures, thereby guaranteeing transparency of process and opportunity for input from interested parties to that process.

4.2 ***Development of technical detail of restart services***

MacGen seeks to highlight that the requirements for development and publication of the technical description of services and associated guidelines may lead NEMMCO to an excessively narrow specification of the types of services that may be suitable for providing SRAS. In doing so, MacGen seems to be assuming a particular outcome from a consultation that is yet to be conducted.

It would be inappropriate for the Rules, that are relatively inflexible, to be overly prescriptive about the nature of the description of primary and secondary services. In NEMMCO’s view, it is appropriate for the Rules to establish the concepts of primary and secondary services, with the details best

¹⁶ The following criteria are relevant to assessment of the “value” of any specific *restart service*: availability; reliability; capability (timeliness of response and ability to withstand shocks); location (proximity to other generation); effectiveness when combined with other services; and price.

¹⁷ Appendix 1, Section A1.2.1.

¹⁸ See NGF submission p.7.

left to (consulted upon) procedural descriptions. Further guidelines under clause 3.11.4A(c), which would also be subject to consultation, would outline the detail of the process NEMMCO will use to assess tenders.

The concept of *secondary restart services* was developed in response to discussions with MacGen in the early phases of the SRAS review and suggestions that not all *restart services* were of identical capability and reliability.

4.3 Consistency of technical specifications and guidelines

In constructing the recommendations in the **SRAS review Final report** and proposed Rules changes, care has been taken to ensure that inconsistencies between the various components of the proposed SRAS arrangements do not develop.

The following documents are each to be developed by NEMMCO and are subject to Rules consultation procedures:

- service descriptions [as required by clause 3.11.4A(b)];
- guidelines on assessment and testing of proposed services [clause 3.11.4A(c)(1)]; and
- guidelines on establishing the number and type of service in each *electrical sub-network* [clause 3.11.4A(c)(2)].

Furthermore:

- under clause 3.11.4A(d)(1) guidelines must be consistent with the *system restart service standard* (as developed by the Reliability Panel); and
- the expression of interest and tender processes and, by extension, the SRAS contracts are each required to be consistent with all guidelines developed under clause 3.11.4A.

In NEMMCO's view, the outcomes prescribed by the *system restart service standard* must be set independently of any technical parameter including *electrical sub-network* boundaries. Regardless of any restoration outcomes that need to be achieved (as required by a standard), or the technologies to be applied to the task of restoration, *electrical sub-networks* represent the areas of the power system that NEMMCO must plan to be in a position to independently manage should the need arise.

The Reliability Panel is well placed to determine an overall outcomes based *system restart service standard*, but is not equipped to determine detailed technical specifications of *restart services* – this task is most appropriately left to NEMMCO.

4.4 Proposed new / revised definitions of key terms

Questions regarding definitions of key terms can be dealt with in two separate areas:

- “Major supply disruption” and “black system condition”:

NEMMCO has deliberately proposed *system restart plans* to be capable of being applied in circumstances of *major supply disruption* – that may not be sufficiently widespread to be considered a *black system* condition – to ensure that power system emergencies can be addressed regardless of how widespread they are.

A “*black system* condition” is a separately consulted upon threshold¹⁹ at which certain market (as opposed to system) management processes can be invoked. If NEMMCO was to wait until a *black system* condition was declared before it could invoke *system restart plans*, up to 40% of an *electrical sub-network* could remain without supply for an indefinite period because of an inability to use contracted SRAS as the market-based threshold had not been reached.

Powerlink’s alternative definition of *black system* inappropriately relies on 100% failure of supply in a defined part of the power system.

- “Black start capability”, “restart service” and “system restart”:

NEMMCO disagrees with Powerlink’s comments on the definitions of “black start capability”, “restart service” and “system restart”.

NEMMCO’s proposed definition of *black start capability* was designed to be technology independent, in that such capability could include either: a) in-house facilities that could independently start a cold (or warm) unit; or b) trip to house load facilities. Either of these modes of energising a suitable connection point could be employed to provide a *restart service*. Powerlink’s comments appear not to recognise the distinction and hence their comments relating to the definition of “restart service” are not accepted.

Further, a *restart service* needs to be some independent and self-contained source of energy. An interconnector is merely a path over which energy is supplied and not a source of energy itself. Therefore, an interconnector cannot be considered to be a *restart service*.

NEMMCO believes that “Power system restoration” is the correct title for clause 4.8.14 – the focus should be on restoration of the power system following **any** *major supply disruption*, not just restoration from a *black system* condition.

¹⁹ Generally 60% of forecast supply – see NEMMCO, **Power system emergencies, black system conditions and market suspension – Final report**, August 2003. This paper is available from <http://www.nemmco.com.au>.

5 Premiums and allowances

Comment from respondents to consultation

Comment from respondents with respect to premiums and allowances was in two areas:

- *Primary service premium* and willingness to pay
 - MacGen (Section 4.2.3) expresses a view that the *primary service premium* is not the appropriate way to reflect the value of highly dependable restart services.
 - MacGen (Section 5), NGF (p.7) and ERAA (p.3) are concerned about the AEMC role in determining the *primary service premium*.
 - ERAA (p.3) suggests the *primary service premium* is unnecessary.
- Purpose of *additional secondary service allowance*
 - MacGen (Section 5) and NGF (p.7) consider proposed Rules relating to *additional secondary service allowances* to be unclear.
 - ERAA (p.3) indicates there should be no discretion to exceed the standard via use of the *additional secondary service allowance*.

NEMMCO response to comments

5.1 *Primary service premium and willingness to pay*

As noted in Section 2.7.2 of NEMMCO's **SRAS review Final report**

... if remuneration to all contracted *restart services* only reflected costs including a commercial margin, there is little incentive for a tenderer to strive for status as a highly dependable primary service provider. Presuming there is a community desire and preference for contracting with highly dependable *primary restart services* wherever reasonable and practicable, the *primary service premium* would provide the appropriate incentive to improve the dependability of offered services.

Section 2.6 of this **Response to comments** demonstrated that “willingness to pay” is neither practically measurable nor an appropriate benchmark for remuneration of *restart services*. Hence, willingness to pay cannot be used as a benchmark for any *primary service premium*.

The ERAA incorrectly suggests the *system restart service standard* will set a fixed number of primary service providers for each electrical sub-network. If NEMMCO's recommendations with respect to the outcomes-based standard²⁰ are accepted, the number of primary services would not be fixed but would depend on the availability, location and range of all primary and secondary services.

²⁰ As reflected in Section 2.1 of NEMMCO's **SRAS review Final report**.

ERAA questions the benefit of the *primary service premium*. NEMMCO has presumed the more dependable a restart service is, the greater the value the community places on that service. However, NEMMCO maintains that it is impossible to establish the correct value for any specific *restart service* (see discussion in Section 1.3 of NEMMCO's **SRAS review Final report**) and, hence, any recognition of the value of more highly dependable restart services would be a "social judgement" that NEMMCO does not consider itself qualified to make. NEMMCO's understanding of existing regulatory arrangements leads it to believe that if such a judgement is to be made, the AEMC is best placed to make it. NEMMCO has proposed minimal guidance as to how the premium is to be set to avoid the Rules being seen as overly prescriptive.

Where (less dependable than primary) *secondary restart services* are provided, reasonable returns on such investments (including a commercial margin) are guaranteed. In such an environment the incentive to strive for the more highly dependable primary service status may be limited. The *primary service premium* is intended to provide the necessary incentive.

There is no intention that the premium would change mid-way through any SRAS contract term.

5.2 **Purpose of additional secondary service allowance**

NEMMCO's discretion in the procurement of additional *restart services* would be reasonably tightly prescribed. The basic requirement for *restart services* is established by the *system restart service standard*. The way in which NEMMCO determines whether or not the standard can be met is established by guidelines issued under clause 3.11.4A(c).

The concept of the *additional secondary service allowance* has been developed in consideration of an earlier MacGen suggestion that there be some opportunity to cater for differing jurisdictional expectations in the amount of money that should be applied to procurement of *restart services*²¹. Application and use of the *additional secondary service allowance* enables reduction of risk at limited cost. As with the *primary service premium*, there is no "correct" level at which to set such an allowance – the allowance is considered by NEMMCO to be a reflection of the judgement of social value that the AEMC is best placed to make. The *additional secondary service allowance* represents an upper limit of the amount that NEMMCO could spend on *restart services* in addition to the services required to meet the standard, in order to increase the overall dependability of the set of contracted SRAS. The remuneration for the additional secondary services would be on the basis of the price that was tendered – subject to that price not being unreasonable.

²¹ MacGen, in its February 2004 submission to NEMMCO's **Initial proposal** for amended SRAS arrangements (December 2003), suggested: "a two-step process with the Reliability Panel setting a minimum restart standard with the jurisdictions having the option to procure additional services to facilitate a faster or more probable restart outcome".

6 Impact of testing on the power system

Comment from respondents to consultation

- Powerlink Qld (p.2,3) suggests additional clauses (to those proposed by NEMMCO) be inserted in the Rules for the avoidance of doubt regarding how *restart service* testing is to be managed.

NEMMCO response to comments

NEMMCO believes the additional clauses suggested by Powerlink are unnecessary, as existing Rules already make adequate provision for ensuring the maintenance of power system security and reliability – which are obligations of NEMMCO. Specifically, the existing clause 4.3.1 goes into some detail with respect to how system security is to be managed that adequately cover circumstances where *restart services* are to be tested. This matter was also dealt with in some detail in Appendix A, Section A1.3.3 of NEMMCO's **SRAS review Final report**.

Powerlink's comments on clause 4.8.13 are supported and are addressed by clause 4.3.1.

7 Administrative matters

Comment from respondents to consultation

Comment from respondents with respect to administrative matters was in four areas:

- Confidentiality of system restart plans
 - MacGen (Section 5) wonders whether the system restart plan would be released to SRAS providers.
- One-sided tender process
 - Snowy Hydro (p.4) believes the proposed tender process is one-sided and gives too much discretion to NEMMCO.
- Further review of SRAS arrangements
 - NGF (pp.2, 9) and Snowy Hydro (p.8) each indicate that the AEMC should undertake a further review of SRAS arrangements.
- Assistance provided by TNSPs to tenderers as an “excluded service”
 - Powerlink Qld (p.1) seeks to have any assistance provided by TNSPs to tenderers to be considered to be an “excluded service”.

NEMMCO response to comments

7.1 Confidentiality of system restart plans

There is no intention to release the *system restart plan* in its entirety to any party. To the extent necessary for parties to prepare *local black system procedures*, relevant parts of the *system restart plan* would be made known on an “as needs” basis.

7.2 One-sided tender process

In undertaking a tender process where several different plants are contracted to perform largely similar functions (provide a *restart service*), NEMMCO cannot afford to have contract structures that vary substantially from service provider to service provider. It is to ensure a degree of commonality in the SRAS contract structure that NEMMCO proposes clause 3.11.5C(a)(4).

7.3 Further review of SRAS arrangements

NEMMCO does not agree with the NGF assessment that the ability to extend existing SRAS contracts by 12 months means there is time for development of an entirely new package – NEMMCO’s submission refers. NEMMCO has already undertaken a very comprehensive and transparent review of SRAS arrangements and does not believe a further review is warranted.

7.4 Assistance provided by TNSPs as an “excluded service”

Whether provision of analysis by a TNSP to support the development of a tender for SRAS is considered to be part of a TNSPs core business or an

“excluded service” is a matter for policy makers, not NEMMCO. NEMMCO proposed the requirements in clause 3.11.5A to ensure that no undue impediments were placed on the development of competition in *system restart ancillary services*.