11 April 2005

Mr John Eastham
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National Electricity Code Administrator Limited
Level 5, 41 Currie St
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Dear John

System restart review recommendations and pricing under market suspension

This letter addresses two separate, although indirectly related issues:

- Code changes to implement the recommendations of the *Review of system restart ancillary service arrangements*; and

- Code changes to address an anomaly related to the how market pricing might proceed should the market be suspended.

Relevant Code changes are outlined in Attachments 1 and 3. Proposed deletions from the current Code are indicated in ~~strikethrough~~, and proposed additions to the current Code are indicated in underline.

1. Review of system restart arrangements

A review of *system restart ancillary services* (SRAS) was undertaken by NEMMCO in accordance with requirements of clause 3.1.4(a1) (Market design principles) of the National Electricity Code. The outcomes of this review were published by NEMMCO on 9 July 2004 in *Review of system restart ancillary service arrangements – Final report* (the "**Final report**")[1].

Key recommendations of the review were:

- the adoption of an outcomes-based standard – the proposed Code changes would require the standard to be determined as soon as practicable by the Reliability Panel;

- the specification of assumed levels of infrastructure damage as a basis for testing whether the standard has been met;

- the development of the concepts of primary and secondary restart services that differ in terms of availability and reliability;

- the potential for contracting additional services over and above the number required to meet the outcome-based standard;

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[1] Available at: http://www.nemmco.com.au/ancillary_services/168-0028.htm.

- an ability to specifically incorporate private 'off-market' or customer specific energy support arrangements into the NEM restart plan; and

- adoption of principles to enhance the prospects that contracting outcomes are aligned with reasonable terms and conditions in at least most circumstances.

This letter (and attachments) outlines proposed Code changes, and the reasons for those changes, that NEMMCO believes are needed to give effect to the recommendations of the **Final report** as required by the Code.

Attachment 1 to this submission provides detailed drafting (in annotated form) of changes to the existing Code to give effect to improved system restart ancillary service arrangements consistent, where possible, with the recommendations of the **Final report**.

In nearly all respects, the Code changes outlined in Attachment 1 reflect the recommendations contained within the **Final report**. Where practicable, a brief explanation of the reasons for the proposed Code construction is indicated in the right hand column of Attachment 1 – in many cases, references to relevant sections of the **Final report** are included that will provide the reader with detailed background on the reasons for the proposed Code changes.

However, in some instances, further consideration of the report's recommendations and the existing construction of the Code has caused NEMMCO to adjust the arrangements recommended in the **Final report**. The areas where there has been some refinement to the **Final report** recommendations are as follows:

- rather than having all SRAS costs smeared across the market, regional recovery for SRAS costs is now being proposed – although costs would continue to be equitably shared between generators and retailers within a region;

- amendment to the point at which tenderers would be able to withdraw offers to provide restart services; and

- the AEMC is the body recommended to determine the value of any primary service premium and allowance for expenditure on additional secondary restart services.

Attachment 2 provides some detailed information to explain the rationale behind the above refinements to the **Final report** recommendations.

It is important to note that, given the complexities and inter-relationships involved in proposed new system restart ancillary service arrangements, NEMMCO believes the proposed Code changes outlined herein should be implemented as a package. Should NECA's consultation on the attached package of proposed Code changes lead to a conclusion that elements of the package need to be amended, care needs to be taken that inter-related elements of the package are also appropriately amended.

2. Pricing under market suspension

As currently worded Code clause 3.14.5 can be interpreted to require NEMMCO to assess, on a trading interval by trading interval basis, what method of pricing should be adopted during a market suspension. Such an analysis would be inherently difficult in that it is not only an assessment of whether the current method of pricing remains practical, but also requires a "what-if" analysis as to whether a possible alternative might now be practical, the latter being an inherently a more difficult decision. Under extreme conditions such as a system shutdown or major IT failure that might lead to market suspension, it would be very doubtful that NEMMCO would be able to conduct such an analysis on a continuous basis.

The proposed changes to Code clause 3.14.5 as outlined in Attachment 3 would address this issue by making it clear that, once a method of suspension pricing is adopted it should not be changed unless the situation deteriorates further such that the chosen method is no longer practical. Thus, if pricing according to the fixed pricing schedule is decided upon, then suspension pricing would continue on that basis until the market suspension ceased.

If you have any questions regarding the review of system restart arrangements, please contact Stuart James (Ph 03 9648 8802). Questions regarding pricing under market suspension should be directed to Mark Miller (Ph 02 9239 9108).

Yours sincerely

Brian Spalding
Chief Operating Officer

Enc.

cc. Peter Adams [by email to: padams@neca.com.au]

Attachment 2

Additional information in support of Code changes

Regionalisation of SRAS cost recovery

Background and introduction

In the **Final report**, Section 2.7.3, NEMMCO recommended:

> … that SRAS costs continue to be allocated and recovered across the entire market on the basis of 50% to customers and 50% to generators using energy as the metric. Costs would not be allocated on a regional or *electrical sub-network* basis.

In discussing the rationale for this recommendation, NEMMCO indicated it was of the view that:

> …SRAS cost recovery should not be recovered on either a sub-network or regional basis, but costs should be allocated uniformly across the market. Given it is recommended that a uniform *system restart service standard* would apply across the whole NEM, the benefits to the market of restoring the system are unlikely to differ across sub-network or regions. Furthermore, in the case of a *black system* in a single *electrical sub-network*, it [is] likely that other sub-networks could assist in restoring supplies. This support may be available because adjacent sub-networks restart first, or are not in *black system* condition. It is contended that these arguments support a case for sharing the restart procurement costs across the whole market.

Following further consideration of this matter, informed by the preparation of specific Code provisions, NEMMCO has reached some different conclusions regarding the case for sharing the restart procurement costs across the whole market. NEMMCO is now recommending a regional basis for recovery of SRAS costs, while maintaining the principle that generators and market customers should equitably share the costs of SRAS.

A regional basis for recovery of SRAS costs reflects NEMMCO's amended view that:

- **provision should be made for variation in restoration standards between regions** as jurisdictional governments can, for social policy reasons, make representations to the Reliability Panel for a more or less onerous restoration standard in specific areas of the power system – this is provided for in the process of setting standards and was discussed in Section 2.1 of the **Final report**;

- **there is only a limited prospect that a *restart service* procured for duty in one *electrical sub-network* would be used <u>on its own</u> to assist with restoration of a sub-network to which it has not been specifically assigned**[2], thereby

[2] NEMMCO maintains the view that it is possible for viable restart service to assist in the restoration of one sub-network from an adjacent sub-network. NEMMCO is merely observing that there is a low probability

diminishing the strength of the case for sharing the restart procurement costs across the whole market; and

- **legitimate financial equity concerns can arise** because, regardless of the care taken to be as consistent as possible in the application of sub-network criteria[3] and procurement activities to meet a single *system restart service standard*:

  – the number of services required to meet the standard could differ from sub-network to sub-network depending on network topology;

  – achievable restoration outcomes in each sub-network are like to differ according to the location and technology of *restart services* actually procured;

  – the costs of maintaining and delivering *restart services* are likely to differ according to the nature of the technology applied to the task,

  with a result that the costs of delivering acceptable levels of restart service could differ substantially between sub-networks – inequities could be magnified should jurisdictions seek to have different standards applied for social policy reasons.

Once regional SRAS costs are determined, then those costs can be equitably allocated between generators and market customers along the lines proposed by the **Final report**.

Methodology for allocation of SRAS costs to regions

In assigning SRAS costs to regions it must be recognised that restart services are procured, and procurement costs incurred, on the basis of electrical sub-networks. The possibility that sub-networks could straddle regions for legitimate system security reasons adds an element of complexity to a regional cost allocation process. Recovering SRAS costs on a regional basis therefore requires a methodology to be developed for:

- assigning sub-network costs to regions; and

- apportioning regional SRAS cost allocations between generators and market customers.

Existing information systems enable NEMMCO to identify:

- generation delivered to each transmission node;

- energy taken from each transmission node; and

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of a major supply disruption playing out in such a way that a restart service procured for duty in "sub-network A" becomes the sole source of assistance in restoring "sub-network B".

[3] In the context of preparing for the next non-market ancillary services tender (for services to be delivered from July 2005), NEMMCO has engaged in consultation with TNSPs as to where boundaries of newly defined electrical sub-networks should be drawn. These consultations have revealed quite different interpretations between TNSPs as to the appropriate weighting to be applied to the agreed criteria

- the location by electrical sub-network and region of each transmission node.

Where electrical sub-network boundaries do not coincide with region boundaries, and where sub-network boundaries cross region boundaries, the above information provides an opportunity to develop an energy weighted allocation of sub-network SRAS costs to regions. Regionally allocated SRAS costs can then be apportioned between generators and retailers on the basis of regionally delivered / consumed energy.

The proposed Code changes [amended clauses 3.15.6A(d) and (e)] reflect the following methodology.

- Let:
  - electrical sub-networks be designated by the index "x"
  - regions be designated by the index "j"
  - TNIs be designated by the index "k"

  such that:

TNI_k	is total energy "delivered to" / "consumed at" transmission node "k" in the 52 weeks ending on or before the immediately preceding 31 March
$TNI_{k,x}$	is total energy "delivered to" / "consumed at" transmission node "k" located in electrical sub-network "x" in the 52 weeks ending on or before the immediately preceding 31 March
$TNI_{k,j}$	is total energy "delivered to" / "consumed at" transmission node "k" located in region "j" in the 52 weeks ending on or before the immediately preceding 31 March
$TNI_{k,x,j}$	is total energy "delivered to" / "consumed at" transmission node "k" located in **both** electrical sub-network "x" **and** region "j" in the 52 weeks ending on or before the immediately preceding 31 March
$TNI_k(gen)$	is total energy delivered to transmission node "k" by a generator in the 52 weeks ending on or before the immediately preceding 31 March
$TNI_k(cust)$	is total energy consumed at transmission node "k" by a market customer in the 52 weeks ending on or before the immediately preceding 31 March
$\mathbf{Cost_x}$	is the cost of SRAS assigned to electrical sub-network "x"

- Where an electrical sub-network is wholly contained within a region, 100% of the electrical sub-network's SRAS costs are assigned to that region.

- Where electrical sub-networks cross region boundaries, the following allocation of electrical sub-network SRAS costs will apply:

  – For each electrical sub-network "x", determine an allocation of energy to each region "j":

    : total energy in each electrical sub-network "x" is:

$$\mathbf{Energy_x} = \sum_k \mathrm{TNI}_{k,x}(\mathrm{gen}) + \sum_k \mathrm{TNI}_{k,x}(\mathrm{cust}) \quad [4]$$

    : the share of $\mathbf{Energy_x}$ allocated to each region "j" is:

$$\mathbf{Share_{x,j}} = \left\{ \sum_k \mathrm{TNI}_{k,x,j}(\mathrm{gen}) + \sum_k \mathrm{TNI}_{k,x,j}(\mathrm{cust}) \right\} / \mathbf{Energy_x} \quad [5]$$

  – The cost of SRAS to be allocated to region "j" is calculated as:

$$\mathbf{Cost_j} = \sum_x \left\{ \mathbf{Cost_x} * \mathbf{Share_{x,j}} \right\}$$

- When region SRAS costs are determined, costs will be allocated between generators and customers according to their share of energy (delivered / consumed) in that region as follows:

  – Total energy in region "j" is:

$$\mathbf{Energy_j} = \sum_k \mathrm{TNI}_{k,j}(\mathrm{gen}) + \sum_k \mathrm{TNI}_{k,j}(\mathrm{cust})$$

  – Cost allocated to generators in region "j" is:

$$\mathbf{Cost_j}(\mathrm{gen}) = \mathbf{Cost_j} * \sum_k \mathrm{TNI}_{k,j}(\mathrm{gen}) / \mathbf{Energy_j}$$

  – Cost allocated to customers in region "j" is:

$$\mathbf{Cost_j}(\mathrm{cust}) = \mathbf{Cost_j} * \sum_k \mathrm{TNI}_{k,j}(\mathrm{cust}) / \mathbf{Energy_j}$$

Withdrawal of offers and dispute process

As noted Section 2.7.2 of the **Final report**,

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[4] Note: $\mathbf{TNI_{k,x}} = \mathbf{0}$ if $\mathrm{TNI_k}$ is not located within electrical sub-network "x".

[5] Note: $\mathbf{Share_{x,j}} = \mathbf{0}$ if no part of electrical sub-network "x" is contained within region "j".

> The market for *restart services* is not deep, and there is the distinct possibility that competitive disciplines could be absent when potential service providers develop their expressions of interest and subsequent tendered prices.

Accordingly, there needs to be some mechanism to identify and work through circumstances where competitive disciplines may not be apparent in the tender process. The existing relevant provisions of the Code [clauses 3.11.5(d1) and 3.11.5(d2)] create significant levels of uncertainty for NEMMCO, prospective service providers and the market regarding how such circumstances would be resolved.

NEMMCO believes that the Code changes proposed in Attachment 2 faithfully give effect to the **Final report** recommendations with the possible exception of the treatment of opportunities to withdraw offers. In consultation on drafts of the SRAS review's recommendations, some submissions indicated a desire to ensure participants have a right to maintain their original offer or withdraw it. In response to these submissions, NEMMCO's Final report indicated:

> At any time prior to execution of a contract, or up to the point of a determination through the independently facilitated process, a tenderer would be able to withdraw its offer to provide *restart services*.

Since the **Final report** was produced, it has become apparent that allowing offers to withdrawn at such a late stage of the process may create unacceptable levels of uncertainty in, and potentially undermine, the procurement process at the cost of significant time and expenditure. In drafting new clauses with respect to "ensuring reasonable terms and conditions" and possible dispute processes, NEMMCO is conscious of the need to:

- retain the integrity of the tender process; and
- provide parties with a reasonable opportunity to "walk away" if they perceive a likelihood of being placed in a position where services would be provided in a non-commercial fashion.

However, NEMMCO is also conscious of the system security imperatives that underlie the procurement of system restart services and the need to bring assessment and contractual processes to a timely conclusion. NEMMCO believes proposed clauses 3.11.5C, 3.11.5D and 3.11.5E provide:

- NEMMCO with reasonable and adequate opportunity for assessment of offers – provided all relevant information is provided by prospective service providers in a timely manner;

while also giving

- prospective service providers reasonable an adequate opportunity to assess the commercial value in pursuing good faith discussions with NEMMCO to resolve any uncertainties surrounding the final form of the restart service to be provided to the market.

Unlike existing Code provisions, there is no opportunity for a prospective service provider to invoke a dispute. The reason for this is that, given NEMMCO has clear obligations to:

- conduct an assessment process that is as transparent as possible,

- ensure it procures adequate levels of SRAS for the benefit of the entire market – end-use customers, retailers, generators and all other relevant parties,

it would be inappropriate for NEMMCO to be placed in a position where it was forced to contract with a party NEMMCO considers unable to provide an effective restart service.

Determination of SRAS premiums and allowances

In the Final report (Section 2.71) it was indicated that either NEMMCO or an appropriate regulatory body would determine each of:

- the primary service premium – an additional payment to be made to services qualifying for duty as a highly dependable primary restart service; and

- an allowance for the acquisition of secondary restart services over and above the number of restart services required to meet the system restart service standard

such that these amounts might represent the social value to be placed on the consequent additional security and certainty in the restart process.

NEMMCO has since formed the view – reflected in proposed Code clause 3.11.5G – that the determination role would be best performed by a policy driven body such as the AEMC, thereby providing NEMMCO with a degree of distance from the determination given:

- the social policy elements implicit in the determination of these premiums and allowances; and

- the requirement for NEMMCO to play the central role in the application of the determinations.

In nominating AEMC to carry out the determination of SRAS premiums and allowances NEMMCO recognises that there may be other options, particularly in the current environment where organisational roles are yet to be finalised.