



Guidelines for NEMMCO intervention

REPORT PREPARED FOR THE AEMC RELIABILITY PANEL

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1 Introduction

1.1 BACKGROUND

Frontier Economics (Frontier) has been engaged by the Australian Energy Market Commission (AEMC) to provide a report to the AEMC Reliability Panel (Panel) on certain aspects of the appropriate guidelines for NEMMCO intervention for reliability.

Under clause 8.8.1 of the Market Rules, the Panel is responsible for, *inter alia*:

- Determining and maintaining guidelines governing the exercise of NEMMCO's power to issue directions in connection with maintaining or re-establishing the power system in a reliable operating state; and
- Determining and maintaining policies and guidelines governing the exercise of NEMMCO's power to contract for the provision of reserves (also known as the 'reserve trader' arrangements).

The reserve trader arrangements provide NEMMCO with the ability to contract with market participants for reserve if NEMMCO considers it necessary to ensure that reliability standards are met. The reserve trader arrangements were recently extended and are presently due to expire on 30 June 2006. As part of the Panel's consultations prior to the extension, a number of issues relating to the efficacy of the reserve trader tender process were raised. In response, the Panel issued draft revised guidelines for comment (see section 2.4 below) and a number of submissions were received.

The purpose of this report is to:

- Review the Panel's draft guidelines and submissions received in consultation; and
- Develop recommendations on refinements of the guidelines for the Panel.

Importantly, this report is solely concerned with the Panel's proposed refinements to the guidelines for NEMMCO's reserve contracting powers. This report does not address broader issues surrounding the appropriateness of, and alternatives to, the NEM reserve trader arrangements, nor does it deal with any issues relating to NEMMCO's power of direction. These broader issues may be considered in separate AEMC workstreams.

1.2 STRUCTURE

This report is set out as follows:

- Section 2 reviews the Panel's draft revised guidelines;
- Section 3 reviews participant submissions to the draft revised guidelines; and
- Section 4 discusses the issues raised in the Panel's draft guidelines and participant submissions and provides recommended refined guidelines.

2 Reliability Panel draft revised guidelines

In May 2005, the Panel published draft revised guidelines dealing with refinements to NEMMCO's powers of intervention in the NEM for reliability purposes (Draft Guidelines).¹ While NEMMCO's powers of intervention for reliability purposes under the Rules encompass both its power of direction and its power of contracting for reserves, the proposed refinements were limited to the arrangements for contracting for the provision of reserves.

The areas of refinement were:

- Cost-effective purchase of reserves;
- Ensuring the eligibility of demand-side tenders; and
- The drafting of the 6 month contracting horizon.

The rationales for these proposed refinements were provided in the Draft Guidelines. However, the relevant aspects are briefly recapped below.

The Panel's draft determination on the guidelines is also set out below in section 2.4.

2.1 COST-EFFECTIVE PURCHASE OF RESERVES

The National Electricity Code (Code) was changed in 2001 to add a requirement for NEMMCO to consult with the relevant jurisdiction in determining whether to enter into reserve contracts (clause 3.12.1(c)). The Panel argued this provision "effectively places a consumer value on the reserves, and allows NEMMCO to decide not to contract if the cost exceeds this value." The Panel concluded that this outcome was desirable and should be clarified in the revised guidelines.

2.2 ENSURING THE ELIGIBILITY OF DEMAND-SIDE TENDERS

The Panel highlighted the risk of awarding a reserve contract to a party that would be expected to provide the reserves in any case, through its response to high prices occurring during a period of low reserve. The Panel decided to include a requirement in the guidelines for NEMMCO to undertake reasonable steps to ensure that the tendering party would not have provided a response without payment for reserve.

2.3 THE DRAFTING OF THE 6 MONTH CONTRACTING HORIZON

The Panel argued that the existing guidelines prevent NEMMCO from *tendering* for reserve contracts until 6 months prior to the period of forecast low reserve,

¹ NECA Reliability Panel, *Draft Guidelines for intervention by NEMMCO for reliability*, May 2005. See section 2.4).

whereas they should more appropriately prevent NEMMCO from *contracting* for reserves until the 6 month period. If the period of forecast low reserves is *more* than 2 months away, the Panel confirmed that NEMMCO should be required to call for tenders on reserve provision, but if the period is *less* than 2 months away, NEMMCO should not be required to tender.

2.4 DRAFT DETERMINATION

This section sets out, verbatim, the Panel's draft determination on the revised guidelines:

The guidelines for intervention can be divided into two parts, the timing to be followed and secondly the process and pricing issues.

Timing

The Panel's draft determination is that:

- ◆ NEMMCO must use reasonable endeavours to identify periods when regional reserves are forecast to be less than the relevant reserve threshold(s) and publicise details of the projected shortfall to encourage a market response;
- ◆ if in the reasonable opinion of NEMMCO the shortfall is unlikely to be removed through market responses NEMMCO must, whenever it is reasonably possible, call for tenders in accordance with the process described in this determination. NEMMCO must call for tenders if the forecast period of reserve shortfall commences more than 2 months from the time the shortfall is identified; and
- ◆ NEMMCO may contract for reserve capacity no earlier than 6 months in advance of forecast periods of low reserves. NEMMCO may, however, commence the process by calling for contracts earlier than this.

Process and pricing

A critical part of the Panel's guidelines for NEMMCO's use of the Reserve Trader is the level of payment and the mechanism used to determine that level. The Panel's draft determination is that:

- ◆ payment should be through a fully open, competitive tender;
- ◆ NEMMCO consult with the relevant jurisdiction(s) in its decision to enter into reserve contracts, including through an assessment of the cost of the contract(s) versus the benefit of the additional reserves; and
- ◆ NEMMCO undertake reasonable steps to ensure the tendering party would not have provided a response without the payment for reserve.

3 Participant submissions to draft revised guidelines

This section briefly describes the comments made in the submissions on the Draft Guidelines. The AEMC received four submissions on the Draft Guidelines – from NEMMCO, AGL, and the Energy Retailers Association of Australia (ERAA) and TRUenergy.

The AGL, TRUenergy and ERAA submissions generally made similar points.

NEMMCO's submission was structured in response to the six actual draft guidelines rather than around the three areas of proposed refinement discussed in the Draft Guidelines. However, for the sake of consistency with the structure of the other submissions, the structure of this section is based on the three areas of refinement. Therefore, we have allocated NEMMCO's comments on each draft guideline to the area of refinement we consider most appropriate.

3.1 COST EFFECTIVE PURCHASE OF RESERVES

NEMMCO argued that the proposed guideline requiring NEMMCO to consult with relevant jurisdictions in relation to the benefits and costs of contracting for additional reserves for those jurisdictions was flawed because it:

- partly paraphrased an existing Rule obligation; and
- implied that the consultation could only occur *after* offers for the provision of reserve for that jurisdiction had been received.

For these reasons, NEMMCO considered that the proposed guideline provided an inadequate basis for implementing the Panel's intention to take account of jurisdictions' valuations of reserves in undertaking the contracting function.

In response to this and other concerns, NEMMCO proposed an alternative set of guidelines, which are discussed in section 4 below in the context of providing a template for our recommended guidelines.

Both AGL and the ERAA supported the consideration of the value of reserves in the NEMMCO contracting process. TRUenergy argued that the requirement for NEMMCO to consult with jurisdictions when performing the cost-benefit analysis should be removed and VoLL or an alternative figure should be used to place a *value* on unserved energy. TRUenergy also suggested that NEMMCO apply a probabilistic approach to demand forecasts in calculating the *level* of unserved energy avoided by reserve contracts, rather than focus on an extreme demand trace. Finally, TRUenergy went on to argue that NEMMCO's cost-benefit analysis for entering reserve contracts should be published to promote greater competition in the provision of reserve.

3.2 ENSURING THE ELIGIBILITY OF TENDERS

NEMMCO commented on two draft guidelines that:

- Dealt with regional reserve level information provision to encourage a market response; and
- Sought to ensure that tendering parties would not have provided a response without the payment of reserve.

On the first draft guideline, NEMMCO pointed out an inconsistency between the draft guideline and the Rules and effectively submitted that the particular draft guideline should be dropped.

On the second draft guideline, NEMMCO argued that it would be difficult for it to ensure that tendering parties would not have provided a response without the payment of reserve. NEMMCO could only reasonably satisfy itself about the matter.

AGL urged the Panel to exclude from consideration for reserve contracts, capacity that had been offered in any way to the market in the past. AGL specified that tenderers should need to verify that capacity offered had not been offered:

- through the energy market;
- through the ancillary services market;
- subject to a contract with a retailer for demand-side response; or
- subject to a contract with a retailer for embedded or other generation for use during peak periods.

Further, any capacity that has been considered “committed” within the meaning of the Rules should also be excluded.

TRUenergy argued that demand or supply side capacity that had been previously offered into the energy market should only be eligible for reserve contracts where the participant could demonstrate that it has a future marginal cost above VoLL or would only be able to participate in the energy market following significant investment that would only occur if a reserve contract were awarded. TRUenergy also suggested that NEMMCO could infer evidence of previous demand-side participation in the market by looking at (confidential) metering data processed by NEMMCO or drawing from advice of other market participants.

The ERAA did not object to previously-offered capacity being the subject of reserve contracts. However, it argued that such capacity should not be entitled to any remuneration above what it would receive through the energy market.

3.3 SIX MONTH CONTRACTING HORIZON

A number of NEMMCO’s comments can be related to this area of refinement.

First, NEMMCO focussed on the draft guideline obliging NEMMCO to call for tenders for reserve where the reserve shortfall was unlikely to be removed

through market responses. NEMMCO argued this conflicted with clause 3.12.1(a) and (c) of the Rules, which give NEMMCO the discretion (but not the obligation) to enter into reserve contracts.

Second, NEMMCO highlighted some redundancy of wording in the draft guideline dealing with the six month contracting period. The intention of the draft guideline was to explicitly enable NEMMCO to commence the tender process for reserve contracts prior to the start of the six month period. NEMMCO's view was that such explicit wording was not required, so long as it was clear that no reserve contracts could be entered into prior to the start of the period.

Finally, NEMMCO objected to the draft guideline that states, "payment should be through a fully open, competitive tender". NEMMCO argued that this confused the concepts of "payment" and "contracting" and conflicted with the ability for NEMMCO to contract without a tender in some cases.

Both AGL and the ERAA supported the proposed changes to the six month requirement for reserve contracting but argued that the requirement should be fully reviewed to determine whether it inhibits the effective operation of the reliability safety net.

TRUenergy proposed *ex post* publication of the identity of successful tenderers and the volumes contracted from them, in order to promote greater transparency and competition in the provision of reserve.

4 Discussion and recommended guidelines

Frontier agrees with many of the comments made in submissions to the Draft Guidelines document. At the outset, it is worth stating that we accept most of NEMMCO's drafting comments on the Draft Guidelines. Therefore, it seems appropriate to use NEMMCO's wording for the guidelines as a template for their further discussion and development. This means that two of the Panel's draft guidelines have been removed for the reasons discussed in section 3 above. These are:

- ◆ NEMMCO must use reasonable endeavours to identify periods when regional reserves are forecast to be less than the relevant reserve threshold(s) and publicise details of the projected shortfall to encourage a market response; and
- ◆ payment should be through a fully open, competitive tender.

The remaining draft revised guidelines have been included, in a modified form, in NEMMCO's wording.

NEMMCO's wording is contained in its submission and is as follows:

If *NEMMCO* forecasts that there will be a *medium term capacity reserve* shortfall that is unlikely to be removed through market responses, and determines that it will be necessary or desirable to enter into a *reserve contract* in accordance with clause 3.12.1 of the *Rules*, *NEMMCO* must:

- (a) if the forecast period of reserve shortfall commences more than 2 months from the date *NEMMCO* forecasts the shortfall to occur, publicly call for competitive tenders for the provision of reserves;
- (b) when consulting with each relevant *participating jurisdiction*, consider the expected costs and benefits of contracting for *reserves*;
- (c) not enter into a *reserve contract* unless satisfied that the *reserves* to be contracted would not be provided without the *reserve contract*; and
- (d) not enter into a *reserve contract* more than 6 months before the date when *NEMMCO* forecasts the reserve shortfall to occur.

Italicised terms in these guidelines have the meaning given to them in the *Rules*.

This section provides our analysis of the issues and recommendations for appropriate refinements to the guidelines. Once again, the structure of this section adheres to the areas of refinement used in the Draft Guidelines.

4.1 COST EFFECTIVE PURCHASE OF RESERVES

Reserve contracting should ideally reflect the views of end-users on the value of reserves. As representatives of end-consumers, and in the absence of a delegation of this role to an institution such as the Panel, jurisdictions are best placed to provide information on the maximum price that should be paid for reserves to

maintain reliable supply. It is partly for this reason that the Rules currently require NEMMCO to consult with jurisdictions in deciding whether to enter reserve contracts. Consequently, in our view it would not be desirable to remove the requirement for jurisdictional consultation from the guidelines, as suggested in TRUenergy's submission, unless and until the Rules provided for an institution such as the Panel to set the value of reserves.

Even after accepting NEMMCO's proposed changes to the jurisdictional consultation provision (see (b) above), we believe that the obligation does not go far enough.

Rather than merely requiring NEMMCO to consider the expected costs and benefits of reserve contracting when consulting with jurisdictions – an obligation that seems too vague for the purposes of eliciting the views of jurisdictions on the value of reserves – the guidelines should:

- Require NEMMCO to seek the views of each jurisdiction on the value of reserve contracting in relation to that jurisdiction; and
- Oblige NEMMCO not to enter into a reserve contract unless, *inter alia*, the benefits are likely to exceed the costs, taking into account the views of the relevant jurisdiction on the value of reserve contracting.

In circumstances where jurisdictions do not provide any views on the value of reserve contracts, NEMMCO would need to come to its own reasonable view on the net benefits or otherwise of contracting.

With respect to TRUenergy's proposal for NEMMCO to publish the details of the cost-benefit analysis after the event, there are strong arguments both in favour of and against this move. On the one hand, greater transparency in the analysis could promote more entry and competition in the provision of reserves, especially in the longer term. On the other hand, publishing the details of the analysis would implicitly inform potential tenderers of the maximum willingness of NEMMCO to pay for reserves. This may enhance opportunities for potential tenderers to extract greater value from the reserve contracting process, at the expense of customers. On balance, at this stage and in the context of this limited review, Frontier recommends that NEMMCO's analysis should not be published.

Frontier also understands TRUenergy's concern over NEMMCO's potential use of conservative load traces in calculating the likely level of unserved energy avoided by reserve contracts. The guidelines should require NEMMCO to apply reasonable parameters, including demand forecasts, in determining how it contracts for reserves. This is intended to mean, for example, that it would be inappropriate for NEMMCO to apply a 100% weighting to the 10% probability of exceedence demand forecast in calculating the likely level of unserved energy avoided by reserve contracts.

4.2 ENSURING THE ELIGIBILITY OF TENDERS

Frontier agrees with NEMMCO that it is unreasonable to expect NEMMCO to *ensure* that a tendering party would not have provided a response without payment for reserve. This would require NEMMCO to accurately predict how

the tendering party would behave in the event NEMMCO did not contract with the party. It would be unreasonable to expect NEMMCO, as the market and system operator, to fully appreciate the commercial imperatives or options of a market participant.

Frontier also agrees, in principle, with AGL, TRUenergy and the ERAA that demand or supply capacity that has been previously offered to the market should not be the subject of reserve contracts. Unless the scope for such ‘double-dipping’ is avoided, on both the demand and supply sides, the reserve trader arrangements could unnecessarily distort market-driven investment. At the same time, we consider that AGL’s proposal to exclude capacity that has been considered “committed” within the meaning of the Rules is overly rigid, given the relatively broad criteria for committed plant. For example, even plant that are committed may have somewhat flexible commissioning dates. It would be undesirable if such plant were the subject of a blanket exclusion from reserve contracting.

In addition, NEMMCO has expressed some concerns about guidelines as specific as those proposed by AGL and TRUenergy, on the basis that they introduce too many interpretation difficulties such as the meaning of:

- ‘Capacity’;
- ‘Future incremental cost’;
- ‘Physically unavailable’; and
- ‘Significant investment’.

At least in the context of a fine-tuning exercise, Frontier acknowledges that it may be difficult to introduce new terms and concepts such as these into the guidelines, notwithstanding the stronger signal that such specific provisions could send to potential tenderers for reserve. The risk in a curtailed process such as the present one is in creating guidelines that are vulnerable to dispute and delays.

Therefore, Frontier has only proposed relatively minor changes to NEMMCO’s wording for the eligibility guideline.

To reduce the likelihood of double-dipping while retaining workability and simplicity, NEMMCO should be obliged not to enter into a reserve contract unless the tenderer has demonstrated, to NEMMCO’s satisfaction, that the reserves to be contracted:

- are not the subject of a contract or a market (spot or ancillary service) arrangement that would in effect make them available without the reserve contract; and
- would not otherwise be provided without the reserve contract.

These changes are intended to encourage NEMMCO to require verification from tenderers that their capacity has not been previously offered to the market in any form, in line with the AGL submission. However, NEMMCO could choose another reasonable way to satisfy itself on this matter.

Discussion and recommended guidelines

Finally, another issue raised by TRUenergy was that NEMMCO should be able to infer evidence of previous demand-side participation in the market by looking at (confidential) metering data processed by NEMMCO.

This proposal raises some difficulties because it is not clear whether:

- the Panel has the power to mandate this requirement; or
- NEMMCO presently has the power or right to use metering information in this manner (although it may be able to acquire this right under contract in future).

We suggest this proposal be deferred to a broader review of the reserve trader arrangements.

4.3 SIX MONTH CONTRACTING HORIZON

Frontier agrees with NEMMCO's proposed wording changes to the relevant guidelines except that the expression "*medium term capacity reserve*" in the first sentence may be unsuitable given its definition in the Rules and therefore should be replaced by the expression "reserve level shortfall". Frontier also agrees with TRUenergy that the names of successful tenderers should be published on an *ex post* basis, including the volumes of reserve capacity contracted with each party.

4.4 RECOMMENDED GUIDELINES

Frontier has attempted to reflect our recommended guidelines for reserve contracting in the following suggested wording changes to NEMMCO's proposed template:

If NEMMCO forecasts that there will be a ~~medium term capacity~~ reserve level shortfall that is unlikely to be removed through market responses, and determines that it will be necessary or desirable to enter into ~~a contract for~~ contracts for reserve ~~contract~~ in accordance with clause 3.12.1 of the Rules, NEMMCO must:

(a) if the forecast period of reserve shortfall commences more than 2 months from the date NEMMCO forecasts the shortfall to occur, publicly call for competitive tenders for the provision of reserves;

(b) when consulting with each relevant *participating jurisdiction*, seek the views of the participating jurisdiction on the value of contracting for reserve for that participating jurisdiction~~consider the expected costs and benefits of contracting for reserves~~;

(c) not enter into a contract for reserve ~~contract~~ unless ~~satisfied that~~:

- (i) the tenderer has demonstrated, to NEMMCO's satisfaction, that the reserves to be contracted for is not the subject of another contract or market arrangement that would, in effect, make it available without the contract for reserve and would not otherwise be provided without the contract for reserve ~~contract~~; and

(ii) satisfied that the benefits of entering into the contract for *reserve* are likely to exceed the costs, on the basis of reasonable assumptions about key parameters, including expected demand, and applying any views from the participating jurisdictions provided under paragraph (b) on the value of contracting for *reserve*;

(d) not enter into a contract for *reserve* ~~contract~~ more than 6 months before the date when NEMMCO forecasts the reserve shortfall to occur; and

(e) within 1 month after entering into a contract for *reserve*, publish the name of the counterparty to the contract and the volume and timing of *reserve* procured under the contract.

Italicised terms in these guidelines have the meaning given to them in the *Rules*.

Appendix – ‘Clean’ version of proposed guidelines

If *NEMMCO* forecasts that there will be a reserve level shortfall that is unlikely to be removed through market responses, and determines that it will be necessary or desirable to enter into contracts for *reserve* in accordance with clause 3.12.1 of the *Rules*, *NEMMCO* must:

(a) if the forecast period of reserve shortfall commences more than 2 months from the date *NEMMCO* forecasts the shortfall to occur, publicly call for competitive tenders for the provision of *reserve*;

(b) when consulting with each relevant *participating jurisdiction*, seek the views of the *participating jurisdiction* on the value of contracting for *reserve* for that *participating jurisdiction*;

(c) not enter into a contract for *reserve* unless:

(i) the tenderer has demonstrated, to *NEMMCO*'s satisfaction, that the *reserve* to be contracted for is not the subject of another contract or *market* arrangement that would, in effect, make it available without the contract for *reserve* and would not otherwise be provided without the contract for *reserve*; and

(ii) satisfied that the benefits of entering into the contract for *reserve* are likely to exceed the costs, on the basis of reasonable assumptions about key parameters, including expected demand, and applying any views from the *participating jurisdictions* provided under paragraph (b) on the value of contracting for *reserve*;

(d) not enter into a contract for *reserve* more than 6 months before the date when *NEMMCO* forecasts the reserve shortfall to occur; and

(e) within 1 month after entering into a contract for *reserve*, *publish* the name of the counterparty to the contract and the volume and timing of *reserve* procured under the contract.

Italicised terms in these guidelines have the meaning given to them in the *Rules*.

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