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Energy Security Board  
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## **EnergyAustralia addendum to submission to National Energy Guarantee Draft Design Consultation Paper**

Following our recent submission to the Energy Security Board, we have received stakeholder feedback seeking additional detail on points made in our submission.

The points covered in this addendum include:

- Why we prefer reliability certificates to other mechanisms if a Procurer of Last Resort (e.g. Improvements to Reliability and Emergency Reserve Trader or RERT) is not adopted;
- Clarification that we do not support the "book build" proposal as outlined in the Consultation Paper as a centrally procured Reliability Guarantee - rather we suggest an opt-in form of "book build" could be added to the RERT as an option for smaller market participants to choose to contract through the AEMO process; and
- Further detail on the purpose of allocating a fixed ratio for reliability targets to customer usage.

As always, we remain open to further discussions.

Regards

**Mark Collette**  
**Energy Executive**

## 1 What is EnergyAustralia’s preferred mechanism for a reliability guarantee?

Our preferences on the reliability guarantee are (in rank order):

1. Procurer of last resort (best delivered through improvements to the RERT); and
2. Reliability certificates.

We believe that once an emissions mechanism is in place, the key issues impeding investment in the electricity sector will be removed. Therefore, we believe improvements to the RERT (which could also be seen as a short-term Procurer of Last Resort) is a sufficient safety net for reliability.

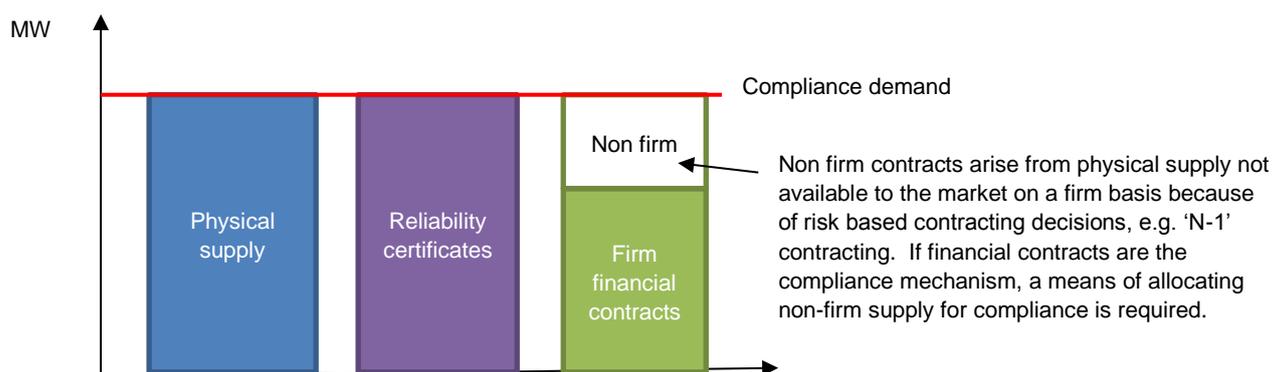
However, if the case can be made that there is a genuine reliability issue that needs to be addressed and a convincing case is made that a form of the Procurer of Last Resort is insufficient for the Reliability Guarantee, we are open to further exploring reliability certificates as the next most preferable mechanism.

We see reliability certificates are the simplest market based mechanism to implement the Reliability Guarantee, primarily because they can be added in a manner that complements existing financial markets. We believe all existing sources meeting the eligibility criteria (to be developed, e.g. capacity available on demand at any time for 5 hours, tested annually) should be given a certificate for each MW. These certificates could then be purchased by retailers and used for compliance with the retailer targets set under the Reliability Guarantee.

We have considered both certificates and existing financial instruments (swaps, caps, etc) as compliance mechanisms. In evaluating both, we note problems to solve include:

- Matching compliance instruments with physical reliability outcomes;
- Ensuring all compliance instrument supply is available to the market (see Figure 1); and
- Simplicity of use.

Figure 1: Matching compliance demand with reliability compliance mechanisms



Financial instruments require trade reporting and other mechanisms to check physical compliance outcomes versus financial purchases by retailers. Conversely, reliability certificates could be setup as a new mechanism with a structure like the Renewable Energy Target, with certificate eligibility and creation effectively providing the physical check for reliability.

A thornier issue for the use of financial instruments as a compliance mechanism is the challenge of ensuring all physical supply is contracted. As shown in Figure 1, generators typically reserve a portion of their capacity to manage the risk of forced outages. This capacity is not available to the market as a firm contract. Typically, however, generator outages are not coincident and so from a whole of market perspective customers should expect the system to plan for potential outages across the whole installed generation base – not every generator simultaneously (which is what contracting of every generator at less than full output implies).

Asking generators to sell this capacity is problematic because it exposes generators more frequently to the financial risks of being short to the market price cap of \$14,200/MWh. It may be possible to overcome this issue through consideration of the use of non-firm financial contracts as compliance instruments or other means.

However, it is much simpler and easier to use reliability certificates to solve this problem. Generators can sell reliability certificates for their total capacity, while selling financial contracts against only the portion of their capacity as their risk appetite permits. The financial contracts and real-time spot price signals continue to provide strong signals for real time availability, while the reliability certificate 'top up' ensures adequate capacity for the year.

Finally, reliability certificates require less change to existing market structures and trading patterns than introducing the various mechanisms and tools required to track physical compliance with financial contracts. This makes it faster and simpler.

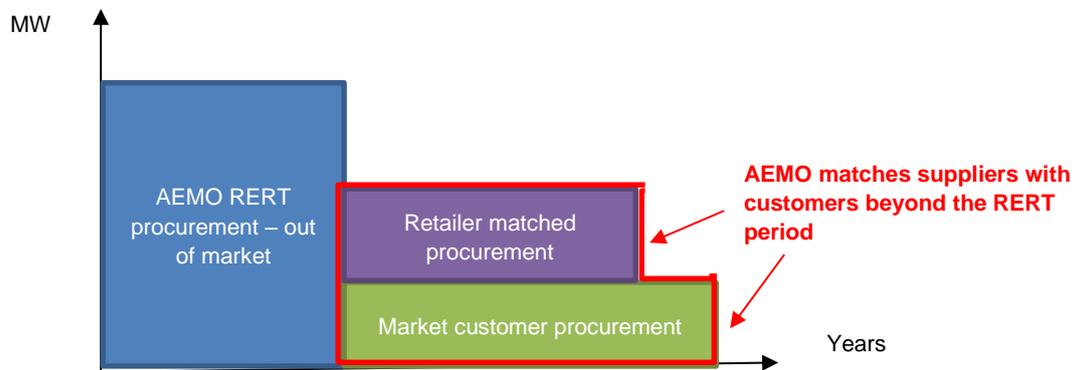
## **2 Explain how the AEMO book build process fits in your conception of a Procurer of Last Resort**

We have feedback from some stakeholders that they interpret our submission as supporting the AEMO "book build" process as outlined in the ESB Consultation Paper. That is not the case. As noted above, we prefer a short-term Procurer of Last Resort (modification of the RERT) and if the case for reliability is made to warrant an additional reliability mechanism, reliability certificates.

Our submission simply suggested that a potential enhancement to a Procurer of Last Resort, such as the RERT, would be to enable a "book build" option for willing market participants. We suggest that the proposed "book build" mechanism could be used not as a Reliability Guarantee, but instead as an augmentation to the RERT. The intent of this suggestion is to allow inclined market participants (e.g. small retailers, market customers) to make offers for in-market purchases beyond the purchase of last resort period AEMO will procure.

Our thinking is that the "book build" process may allow a combination of the Procurer of Last Resort function (in the near term) for supply outside of the market with in market sales to market participants (in the medium term). This is illustrated in Figure 2. The intent here is to 'piggy back' on the AEMO process and provide more options to smaller players to access capacity.

Figure 2: Illustrative aggregation or "book build" option to Procurer of Last Resort



If AEMO is required to trigger a procurer of last resort function, AEMO will be going to market for supply outside the market for up to 18 months (a reasonable planning horizon if the last resort provisions are triggered in our view).

The advantage of this approach is that it may reduce procurement costs for AEMO for the reliability gap and smaller players for their market exposures beyond the market compliance gap.

### 3 Explain further your fixed compliance allocation ratio

In our submission we suggested exploring the use of a fixed compliance ratio of MW to MWh as a means of allocating the Reliability Guarantee.

The problem we are seeking to address here is the complexity of allocating the Reliability Guarantee out across retailers and market customers.

We understand that AEMO will be required to allocate a target demand (MW) compliance level to each retailer or customer when a reliability gap is triggered. For argument's sake, let us say that for a gross 10,000 MW market demand is required in 2021 and EnergyAustralia is allocated a target of 2500 MW in 2018 based on historical share of demand. This target will represent 2500 MW of compliance demand for EnergyAustralia at the time of peak system load.

EnergyAustralia will then win or lose customers. Let's say EnergyAustralia won customers with a peak demand of 500 MW. The new customer's peak demand will likely occur at a different point in time to the system demand, i.e. it may be 400 MW at the time of peak system demand.

In this context, EnergyAustralia must estimate and manage **both** the customer's peak demand risk and the compliance demand risk at the time of peak system demand (and potentially changes in the compliance demand level at time of peak system demand).

Allocating a compliance demand to every customer is probably possible, and each retailer could understand and manage this risk dynamically – but with large numbers of customers, the question we raise is around efficiency and effectiveness of implementation.

An alternate allocation mechanism is to estimate each year a ratio of compliance certificates (or MW contracted with eligible instruments) per MWh of usage. So if total

demand in a system was 10,000 MW and total usage was 50 TWh then the ratio would be  $10,000/50,000,000 = 1/5000$ . Then each retailer or customer would have an obligation to purchase 1 certificate per 5000 MWh of usage, measured ex poste.

The advantage of this approach is that it is simple and requires less forecasting complexity by participants, ensuring that the mechanism can be understood and used by the broadest number of participants. Such a clear mechanism also allows rapid transacting between participants as customers move between retailers.

There are clearly other issues that arise, e.g. inefficient matching of reliability costs with an individual user's demand.

Overall then there is a trade-off between complexity and accuracy and ease of implementation. The suggested use of a ratio for allocation is made to improve simplicity in implementation.