PUO Submission – Reserve Capacity Pricing
Summit Southern Cross Power Holdings Pty Ltd

Thursday 3rd May, 2018

Attn: Matthew Martin
Director, Wholesale Energy Markets
Public Utilities Office
Department of Treasury
Locked Bag 11
Cloisters Square WA 6850

PUOSubmissions@treasury.wa.gov.au

Dear Matthew,

Response to PUO Discussion Paper: Improving Reserve capacity Pricing Signals – alternative capacity pricing options

Please find a brief response to the above PUO paper.

Summit Southern Cross Power Holdings Pty Ltd (SSCPH) is a significant and long-term investor in the WEM, with an interest in the effective operation of the market, including the adoption of efficient pricing signals. While SSCPH welcomes a review of the RCM, there is concern that a narrow focus on pricing will consume scarce time and resources at a point where there are significant challenges facing the WEM, and the RCM in particular, which require attention.

It is the hope of SSCPH that the current pricing review can be expanded to more holistically review the likely impacts of the rapidly changing energy supply/demand paradigm in the WEM, with a view to minimise future disruption and cost.

SSCPH remains very interested in participating in discussions impacting the WEM and its investments within it. If you have any queries regarding the content below, please contact me to discuss.

Yours sincerely,

Shane Cremin
GM Commercial & Strategy

THE PUO DISCUSSION PAPER.

It is encouraging that the PUO is casting an eye on the Reserve Capacity Mechanism (RCM). However, by limiting the focus on pricing, is the PUO discussion is asking the right questions? There is no doubt that the RCM would benefit from a more robust pricing mechanism which better reflects the value placed on new capacity in times of shortage, as well as on old or ineffective capacity in times of surplus. But in the case of the WEM, this is akin to focusing on the visible tip of an iceberg without understanding the depth of the issues beneath the surface.

The paper uses the term 'supply-demand capacity balance'. The WEM uses an unserved energy reliability criterion of 0.002%. In focusing narrowly on the 'supply-demand capacity balance', the PUO is specifically looking at the efficiency of meeting this requirement. This is treating the RCM like a reserve trader mechanism (procuring strategic reserves) as has been adopted in the NEM. A reserve trader mechanism has little impact on the function of the rest of the market – indeed; it is typically used to safeguard energy-only markets. It is relatively easy to have a purely price related discussion around more efficient procurement under a reserve trader mechanism. But the RCM pervades almost all aspects of the market, so needs to be reviewed more holistically.

The important point not mentioned in the PUO paper is that the WEM (and pretty much all other energy systems around the world) is at a critical juncture in its short life, where the rate of change of the supply/demand paradigm is so great, that significant changes on how the sector operates can be expected to materialise very quickly. Over the next ten years, there is a likelihood that the retirement of older thermal generation and its replacement with variable, but lower-cost renewable generation, will create a situation where the current RCM will not certify enough reserve capacity to allow retailers to settle their IRCR obligations[1] – even though there will be ample bilaterally contracted energy to keep the system in balance. In short, the WEM (and the RCM), was not designed for the task ahead and is in urgent need of review.

WHAT CAPACITY HAS THE RCM DELIVERED IN THE WEM?

The RCM is priced on the assumptions underpinning a new entrant 160MW diesel fired OCGT. In other words, the type of facility that is expected to run for a few hundred hours every other year. And, along with DSM, this is what it has attracted. Of the considerable generation that has been brought into the market since the start of the WEM, most of it was not attracted by the capacity mechanism at all:

Capacity Type	RCM required?	Comment
Coal	No	Bluewaters constructed to monetise captive coal supply after supply contract lost to Western Power. Bilaterally contracted.
CCGT	No	NewGen Kwinana constructed as part of Western Power tender process. Bilaterally contracted.

[1] Of course, the way the RCM works is that AEMO will ensure there is enough 'certified capacity' by calling for Supplementary Reserve capacity (SRC), meaning that the mechanism will be reconciled… it will simply cost a lot more than it should.

Capacity Type	RCM required?	Comment
Wind/Solar	No	Multiple wind and solar facilities driven by federal environmental policies. Typically bilaterally contracted with all output (energy, capacity, LGCs) awarded to retailer. Low levels of capacity credits.
HEGTs	No	LMS100's constructed by Verve Energy to meet Ancillary Service obligations.
Gas/diesel OCGT	Yes	Tesla; Merredin; Neerabup; Western Energy[2]. Some contracted, some merchant – but reliant on capacity credits.
DSM	Yes	Overcompensated by RCM, but a very useful product for meeting P90 peaks

Is this a problem? Not if the RCM is applicable only to those last 500MW or so of 'strategic reserves', which are unlikely to be bilaterally contracted and which are required to prevent a supply-demand capacity mismatch for a few intervals once every ten years.

WHAT IS IT THAT THE RCM IS MEANT TO BE DOING?

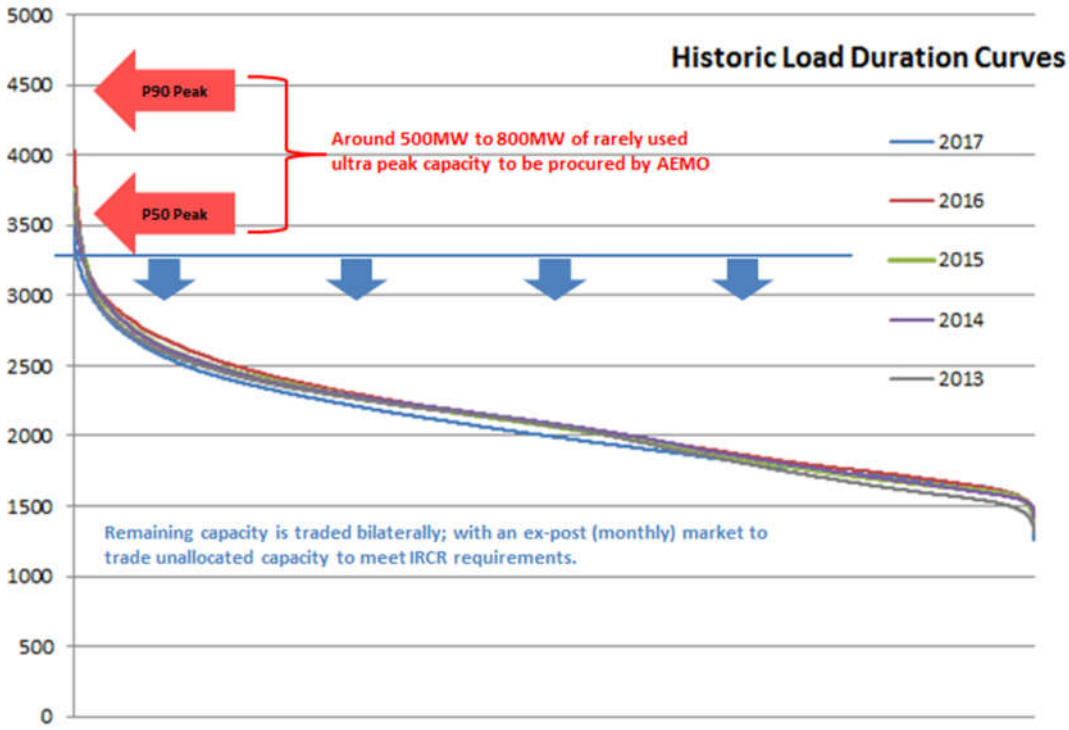
The way the RCM is configured in the WEM appears a little schizophrenic. If it is conceded that the RCM should only be used to manage the 'supply-demand capacity balance', it may be preferable to scale it back considerably to a much simpler mechanism, along the lines of a hybrid Reserve Trader/Capacity Obligation model.

The WEM comprises a bilaterally traded energy market, with AEMO only settling the balancing and STEM markets. The small amount of energy settled in the market is likely a more efficient outcome for retailers to manage their load fluctuations at the margin, rather than attempting to bilaterally contract for the precise quantities. There may be some sense in adopting a similar structure under the RCM. AEMO could set a lower threshold (say the P50 peak demand plus reserve margin) and set IRCR values based on this. Retailers would bilaterally contract for capacity, which is certified in the same manner as is currently the case. An ex-post (monthly) settlement market could enable 'unders and overs' to be traded – with obligations on all participants to make capacity available. This is not terribly different from what occurs already, given the IRCR settlement obligation nets off capacity credits, making any administered RCP meaningless. An ex-post settlement market might even provide more appropriate pricing signals for capacity.

The difference between the 'P50 plus Reserve Margin peak', and the P90 peak could be the only capacity that AEMO procures from the market. Capacity that is unable to secure bilateral contracts from retailers would bid into this AEMO process. This would typically be reserved for the pure ultra-peak capacity – that which is probably not efficient for retailers to procure individually. This is a

[2] The Western Energy facility was initially chosen as a capacity credit play, based on the low installation cost of the Pratt & Witney Swiftpac aeroderivative units. It turns out that the flexibility of the facility now makes it one of the more valued peaking generators in the WEM, as increasing intermittent and behind-the-meter generation requires flexible dispatch with low cost start-stop penalties.

hybrid Reserve Trader/Capacity Obligation model. Parameters around the type of capacity can be implemented (e.g. should DSM be capped; and should it compete on price with peaking generation). A pay-as-bid auction could be implemented on a rolling annual basis[3] with no maximum price cap – effectively combining the current RCM structure with that of Supplementary Reserve Capacity.



WORK NEEDED GOING FORWARD?

Conducting a review on any aspect of the RCM is not easy. It has been a contentious mechanism for many years; and there are many vested interests in the debate. However, the rapidly changing nature of how energy is supplied; and how demand is met forces a rethink of the RCM. Any review needs to be mindful of these changes and the impacts they are likely to have.

Spending time and resources on 'another' review of the pricing structure will delay the more serious analysis required. It is recommended that the PUO focus on providing stakeholders with a holistic model of the WEM and the likely impacts of the growing trends toward new variable renewable generation (and the displacement of older thermal plant); and the behind-the-meter demand reduction occurring due to the rapid uptake of solar PV. It is imperative that a discussion on the adoption of storage be included[4], given its likely importance to the grid in coming years.

Such a holistic review should interface with upcoming reform on ancillary service markets; and changes to the wholesale energy markets, to ensure that pricing signals are complementary and these equally important segments of the market are not treated as silos.

[3] With certification for a capacity year occurring 3, 2 and 1 year out.
[4] Likely as a discussion around IRCR and the opening up of the sector to multiple service providers at the meter.