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Dr Ray Challen
Steering Committee Chairman
Electricity Market Review (Phase 2)
Public Utilities Office
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Dear Dr Challen,

RESPONSE TO POSITION PAPER ON REFORMS TO THE RESERVE CAPACITY MECHANISM

1. Introduction

Bluewaters Power welcomes the opportunity to provide comments on the issues contained within the “Position Paper on Reforms to the Reserve Capacity Mechanism”.

As previously noted for the Steering Committee’s benefit, Bluewaters owners have invested in the West Australian energy market (WEM) with an expectation that it will operate in a stable and effective regulatory environment. Bluewaters is hopeful the Reserve Capacity Mechanism (RCM) review will deliver solutions which achieve the published Market Review Objectives while also supporting the expectations our shareholders had when committing to invest in this region and market.

The Bluewaters assets are owned by Sumitomo Corporation and Kansai Electric. Additionally, Sumitomo Corporation has a 50% interest in the NewGen Power Kwinana Power Station (328MW CCGT).

Bluewaters Power participates in the WA Wholesale Electricity Market as follows:

- **Generation:** 2 x 220MW (sent out) coal fired power stations, Bluewaters 1 and Bluewaters 2, located in Collie, and each “certified” by the IMO for 217MW of capacity. The power stations were both fully commissioned in 2009 (albeit 6 months apart) and typically provide ~15% to 20% of the energy consumed in Western Australia.
- **DSP Capacity:** Bluewaters Power operates a 20MW Demand Side Program through its relationship with a major contestable load (and energy off-taker).
- **Retail:** Bluewaters holds a Retail License and has long term contracts to supply ~220MW of retail load (ie. Bluewaters has responsibility for NIMs which may draw up to 220MW).

2. Objectives and Principles

Bluewaters is supportive of the reform objectives and principles as set out in page 9 of the Position Paper. Bluewaters believes the Objectives and Principles have been responsibly crafted and overall supports the measures the Steering Committee will recommend if they genuinely and practically align with those Objectives and Principles.

With reference to the **objective** – “Capacity market incentives and outcomes are conducive to a least cost, sustainable delivery of capacity and energy to customers” & “The Reserve Capacity Mechanism is to encourage the efficient utilisation of capacity”

We believe these objectives are strongly linked. Bluewaters is supportive of mechanisms that in aggregate meet the product of those criteria – least cost, sustainable, and efficient utilisation of capacity.

We note a key area of improvement of the capacity mechanism lies in the end users paying for capacity with a degree of utility that optimally meets the general demand for electricity. (Bluewaters does not agree that reducing one's loads demand in order to allow the electricity supply to another load (DSM) qualifies as meeting these criteria.) In order for the market to be sustainable, the market must deliver sustainable, utilisation-efficient capacity to the SWIS. In principle - a sustainable, lowest cost outcome will be achieved when the capacity certified is reflective of the actual load duration curve. Where the cost to end users of installed capacity is the same for all forms of capacity then in principle the market should favour low cost (SRMC) energy generation over high cost generation. This is because, given the fixed cost to the end users is the same, the lower cost of generation will result in lower energy prices when utilised.

With reference to the **objective** – “The Reserve Capacity Mechanism is to provide strong incentives to introduce capacity when there is a forecasted undersupply and strong incentives to remove capacity in times of oversupply.”

If a capacity mechanism is to persist then the mechanism must have a price horizon long enough to allow an investor to make a determination of when a longer-term investment is warranted.

With reference to the **principle** – “The capacity price should reflect the marginal economic value of capacity.”

Economic theory may support this argument on a fluid and instantaneous basis however power stations that support the load requirements of an electrical system are not assets that are economically built and removed from one year to the next (with the exception of DSM). Bluewaters believes that the *trend* of the capacity price should reflect the economic value of capacity such that a persistent shortfall will drive the capacity price much higher, and a persist excess will drive the price towards zero.

3. Bluewater's overarching position

Bluewaters is strongly supportive of the Transition Arrangements and believes those arrangements could be enhanced to provide the permanent mechanism for setting the RCP. Bluewaters has significant concerns regarding the introduction of an auction mechanism – exaggerated primarily by the lack of detail available at the time of drafting this response.

Bluewaters is not able to offer categorical, or even conditional support for the proposed auction model at this stage because there is insufficient detail to assess the impact on our investments and businesses and Bluewaters believes there is a viable alternative model that should be considered (discussed hereafter).

Initial evidence of success in meeting the EMR objectives may be reflected in outcomes where there is a suspension of operations, or decommissioning, of capacity with practically and theoretically zero utilisation on the SWIS.

In the event the transition arrangements are effective in achieving a reduction in excess capacity to ~ 5%, we believe the Steering Committee should assess if those (transitional) arrangements might be meeting the overarching Objectives and Principles of the Position Paper. If the transition arrangements reduce capacity (as intended) and appeared to be achieving the Objectives and Principles, then the decision to subsequently adopt an untested auction mechanism (even one fully designed and largely supported by industry) may be difficult to justify.

Bluewaters considers the simple nature of the “Lantau Curve” provides a better price predictability compared to the more complex (proposed) auction model. Predictability promotes certainty which in turn should reduce the need for market participants to price in a risk premium in their capacity/fixed price offers.

Bluewaters proposes the Steering Committee considers adopting the transition arrangement (with the proposed enhancements discussed below) on an ongoing basis.

4. The Transition Arrangement – Lantau curve

Bluewaters is supportive of the introduction of the “Lantau Curve” and believes the steeper curve will immediately reduce (or at the least contain) the amount of excess certified reserve capacity.

Bluewaters believes the Lantau Curve arrangement could be strengthened in order to enhance the effectiveness in meeting the reform objectives – potentially eliminating the need to switch to an auction mechanism, if those arrangements were effective at reducing excess capacity to ~6%. Bluewaters requests the Steering Committee considers the following:

- Adopt the Lantau curve on an ongoing basis rather than replacing it with an auction model; and
- Periodic review (annually, or perhaps more frequently) of the gradient of the curve to encourage capacity certification (magnitude, and rate of) in the direction it should best move.

It is Bluewaters’ view that an independent body, under a set of clear criteria that are consistent with achieving the reform objectives, could review the gradient periodically to better achieve the objective of excess capacity control. A similar mechanism to compare might be the setting of the cash interest rates by the Reserve Bank of Australia in response to the prevailing macroeconomic condition - with the aim of controlling the inflation rate in response to changes or outcomes in the economy.

Additionally, the proposed arrangement should be less complex, more transparent, and subject to less volatility, when compared to the proposed auction model. Each of those benefits should reduce administrative (and cost) burden on regulators and market participants and in turn reduce inefficient risk-premiums being added to supplier offers.

Bluewaters supports a capacity price cap of 110% of the MRCP as we consider the value of capacity should increase rapidly (perhaps even attract a premium) where there is zero, or near to zero, excess capacity or a shortage. This would provide an appropriate price signal to introduce capacity as required.

5. The Transition Arrangement - DSM

Bluewaters supports the transition arrangements in relation to DSM as set out in the Position Paper:

- DSM will not be afforded “certified reserve capacity” status (capacity which can be acquitted against a load’s IRCR);
- DSM will appropriately count towards the reserve margin (since it can be dispatched before there is involuntary load shedding)
- DSM will be priced according to a regime different to that of generation capacity.

For reasons expanded on later Bluewaters believes these capacity arrangements should persist into the auction period.

6. Dynamic Refunds

Bluewaters supports the Steering Committee’s proposal to introduce a dynamic refund mechanism.

Bluewaters considers a dynamic refund mechanism is likely to better align capacity availability and maintenance activity with the prevailing power system conditions. The mechanism will escalate penalties when it is appropriate to do so rather than somewhat arbitrarily as is currently the case.

The dynamic refund mechanism, in conjunction with “recycling” to generators, should provide additional incentives to maintain high availability. Ultimately, we anticipate a trend towards greater generator availability, and in turn a lowering of cost pass-throughs to retailers and the market as the net cost of capacity refunds to generators reduces.

7. Refund recycling to generators

Bluewaters supports the proposal to distribute the Capacity Cost Refund revenue to capacity providers (Market Generators) rather than capacity users (Market Customers). Bluewaters considers recycling refunds to Generators will provide two key benefits:

1. It will address the issue of the inappropriate and "... inefficient value transfer from Market Generators to Market Customers..."¹
2. It will immediately incentivise Generators to be more willingly available for generation at times of greatest system need.

While Bluewaters believes that refund recycling to generators will incentivise generation availability, we believe that motivation may be very watered-down in a scenario where capacity needs only to be "available". An improved model would at the least require that capacity has proven its availability by generating sometime in the calendar month² (and in any event, must have generated since its last outage); and better still, capacity being eligible for refunds if the unit was actually generating at the time of any forced outage.

Bluewaters' reasoning are as follows:

- Capacity that has committed to run because of STEM outcomes was committed at a given price and therefore a certain intrinsic risk was accepted at that point. If in real time a unit trips, the market price will rise, and the unit that committed in STEM now has a greater intrinsic risk of operating than the case without such commitment. It stands to reason that some of that underlying increase in risk is recovered by that unit being awarded its share of the refund payable in that interval.
- In practice, delivery of generation of energy in real time, not "available capacity", is the actual commodity the energy market needs to deliver to its customers. Rent-seeking capacity is "available" as often as it can't be proven to be unavailable. Bluewaters believes that rent-seeking capacity will continue to hide behind max STEM and balancing prices and may (depending on the characteristics of the recycling rule change) add the windfall gain of capacity refunds to its revenue stream if availability is the only criteria to be paid capacity refunds.
- It is clear that when a model where capacity refunds are paid to units actually generating (when a forced outage occurs) is held against models where refunds are payable to "available" capacity, or to capacity that has recently run and is "available" - that there is no doubt that being a part of a smaller pool eligible for payment is a far greater incentive to be available and generate than either of the other two models.

In summary - Bluewaters considers recycling to capacity actually generating will better incentivise Market Generators to create a change in behaviour to provide energy priced for actual generation.

As a final economic advantage, recycling to actual generation will provide a further separation in value of capacity between capacity that derives some revenue from capacity refunds and capacity that does not.

8. Harmonisation of DSM Availability Requirements with Generation Capacity

Bluewaters supports a mechanism that remunerates DSM in relationship to its availability requirements, and to its actual utilisation. Bluewaters does not support harmonising DSM with generation capacity if its purpose is to then reason that DSM and generation capacity are now similar products and can compete fairly for capacity certification, since they will not be able to provide the same service (yet they will cost retailers and end-consumers the same).

¹ IMO, *Final Rule Change Report: Changes to the Reserve Capacity Price and the Dynamic Reserve Capacity Refund Regime (RC_2013_20)*.

² As recommended under Rule change proposal RC_2013_20.

Bluewaters primarily supports a DSM product as commercial arrangement between a DSM site and a system manager, retailer or generator where the parties can commercially contract where they find value (and where the solution complies with System Management requirements). If there is to be a uniform DSM product then Bluewaters supports creating a technical product where DSM sites are required to be available for a useful and economically valuable contribution to the SWIS and energy market.

The Position Paper implies that as a result of harmonisation DSM will then compete with generation capacity on a “level playing field” when the Auction mechanism is activated. Bluewaters refutes that implication on a variety of grounds and as stated earlier and hereafter, it is Bluewaters’ belief that DSM should not be granted “certified reserve capacity” status.

Upon commencement of the auction period Bluewaters supports maintaining the same transition arrangements for DSM pricing – for DSM certified above the Reserve Capacity Target (RCT) (rather than the DSM being included in the RCT as per the current Market Rules). Better still, DSM as a product should be a bespoke commercial product negotiated between load and generator or load and retailer.

9. The Auction Model

As discussed in section 3 above, Bluewaters is not in a position to unconditionally support the proposed auction model at this stage. Bluewaters offers some high level comments as follows should the Steering Committee recommends progressing with developing an auction model.

In order to make a more informed assessment on the proposed auction model, it is necessary to understand its impacts on our business and the market. Bluewaters considers this is possible only after the detailed design and calibration methodology are known. It is understood that an industry group is likely to be established for the detailed design and calibration processes and Bluewaters will be keen to participate in those processes if invited.

Bluewaters considers the auction model’s calibration process would still essentially deliver an administered RCP rather than that from an efficient price discovery process. Bluewaters considers the case for replacing the administered price transition arrangement by another administered price auction arrangement is yet to be established.

Bluewaters sees merits in setting the auction price cap high at $\sim 1.6 \times \text{MRCP}$. Bluewaters agrees with the Position Paper that this price cap should be high enough to provide sufficiently strong signals for investment when the reserve margin becomes tight or to avert a shortfall in procurement.

Bluewaters has concerns that the calibration process is replacing the current administered price mechanism for another that may be less transparent. That aside, the calibration process should be carried out by an independent body which is transparent and possibly open to some form of public consultation (i.e. not a “black box” process).

The Position Paper states that the annual reconfiguration auction “[given the level of complexity] is not warranted in the Wholesale Electricity Market at this time”. Bluewaters sees merits of this auction in promoting the WEM efficiency and therefore proposes that the Steering Committee considers implementing such mechanism as a future enhancement of the model design (if applicable).

Market participants could be at risk of breaching their contractual obligations if they fail to secure and surrender capacity credits. Bluewaters considers this to be an unnecessary and detrimental disruption to the market. We therefore consider the setting of the auction model should provide a means for market participants to secure a guaranteed assignment of capacity credits. Bluewaters would like some assurance that capacity offered at a $\$0/\text{MW}$ (zero dollars) will be certified (assuming it meets the technical assessment criteria).

As noted earlier - Bluewaters believes the treatment of DSM under the transition arrangements should persist into the “Auction Period”.

Bluewaters notes that the Steering Committee intends to revert to an arrangement where a DSM capacity is priced on the same basis as a generation capacity following the conclusion of the transition period. Bluewaters is concerned this will again result in lowering the capacity price for generation capacity that has higher capital costs (but greater utility) and again result in excess capacity.

Where a decision on post-transition market design may ultimately allow for DSM as being “equivalent” to generation capacity (at least in terms of remuneration from retailers and their customers) then Bluewaters contends that at some point of excess capacity it is fundamentally of no use (except in some incredibly rare circumstances).

In order to maximise the utility of DSM, rather than simply certify every MW that can be technically identified, Bluewaters asks the Steering Committee to consider that DSM have some form of administered criteria that allows for more valuable sites to be certified with some order of priority based on criteria determined by SWIS system operators. Such characteristics might be load location (for locational responses) and load size (where the operator may generically see benefit in being able to call a single large load to respond rather than 40 small loads).

It is detrimental that excess DSM will reduce the capacity price and may inhibit the timely construction of much higher utility generation capacity (with all of the additional benefits generation capacity has ahead of DSM). DSM providers have typically argued the opposite - that delaying the construction of generation capacity is a positive - despite the fact that under the proposed system DSM will cost the same to retailers yet deliver far less utility and benefits.

It is Bluewaters’ belief that DSM has a role to play in system security and as a singular mechanism to provide real-time energy solutions in certain rare circumstances. Bluewaters believes that generation capacity and demand side management are two fundamentally different products serving different functions and with different economic values.

9.1. Fundamental differences in generation capacity and DSM

Generically, the definition of “capacity” relates to the maximum that something can produce or contain. This is a concept that when applied to an electrical network should suggest that increasing capacity increases the maximum quantity of MW (or work) the network can contain, sustain, or produce.

The Oxford definition of “Capacity”:

- “The amount that something can produce”
- “The maximum amount that something can contain”

DSM is not adding to the SWIS’s ability to “produce” or “contain” electricity. Rather, DSM “responds” when the market makes a cash payment to one load so that it can turn off and allow another load to operate. This is not an increase in the system capacity or actual work output, unlike the expansion that takes place when an additional MW of generation capacity is installed.

Generation capacity serves the function of *meeting* electricity demands (and increasing the potential work output on that system), whilst DSM involves paying to *reducing* electricity demands.

As stated earlier, DSM has a place in an energy market and Bluewaters believes the network operator, generators and retailers, can contract directly with DSM providers, and potential DSM loads, to negotiate bespoke commercial solutions where the DSM site is remunerated according to those agreed commercial values. If there is no commercial value for the service there will be no one obliged to pay for it.

Retaining the IRCR mechanism means loads have a direct and efficient economic gain to be made by reducing their load at peak times and thus reducing their IRCR. The Steering Committee should consider the conflict that arises where a DSM mechanism will motivate a DSM site/provider to have a higher peak load (in order to then certify as much DSM “capacity” as possible). Conversely, the IRCR mechanism directly encourages loads to reduce load at peak times in order to reduce their IRCR cost burden. Bluewaters notes that a load that reduces its consumption (in the twelve peak trading intervals) by 1 MW will save as much as 1.5 MW on its IRCR and those cost savings could often be a 100% cost savings – very different from the likely DSM proposition.

The difference between generation capacity and DSM can be further demonstrated when one considers a scenario where the RCT is met exactly, but where some portion of that “capacity” is DSM. In that case, some of the core inputs needed to meet the RCT (determined by the peak energy demand, ~7% generation for ancillary services, and coverage for the largest generating facility being on outage) are in fact loads that will turn off rather than run, as opposed to a level of generation that allows all loads to run as they naturally

require. Bluewaters contends that DSM is only truly of use when the RCT is already met by generation capacity. If this was a characteristic of the DSM product the market should find DSM would naturally fill the position of super-peaker with an expectation of minimal utilisation, and the market could justify lesser capacity payments for that capacity.

Given that DSM and generation capacity (a) are fundamentally different (b) have very different cost drivers and (c) are not practically fungible, it is illogical to price DSM on the same basis as a generation capacity. Bluewaters considers this holds true during and post-transition.

10. Deadline for introduction of the capacity auction

It is Bluewaters' view that the transition arrangements are in fact the better mechanism to manage excess capacity and the RCP. We believe the Transition Arrangements should be adopted for some years in order to provide a glide path for the market to reduce capacity in an orderly fashion and that logically the only reason to introduce deadline for introduction of an auction mechanism is in the event that transition arrangements have completely failed to achieve the target excess capacity.

In the event it is determined that the transition arrangements will fail to meet the target excess capacity (ever) it logically follows that an announcement to that effect be made, and a notice period (eg. two years) given for the introduction of an auction mechanism.

Bluewaters thanks the Steering Committee for considering our comments. Please feel free to contact us if you have any queries or wish to discuss further.

Yours sincerely,

Andrew Stevens
General Manager – Regulatory and External Services