

30 August 2017

Economic Regulation Authority
Level 4, Albert Facey House
469 Wellington Street, Perth WA 6000

Submission in Relation to 2016/17 Wholesale Electricity Market Report

1 Overview

1.1 Introduction

Merredin Energy Holdings Pty Ltd (**Merredin Energy**) welcomes the opportunity to make this stakeholder submission to the Economic Regulation Authority, Western Australia (“**ERA**”) in relation to the “2016/17 Wholesale Electricity Market Report for the Minister Discussion Paper”, dated July 2017 (the “**WEM Discussion Paper**”).

The content of Merredin Energy’s submission is focused on the Wholesale Electricity Market’s (**WEM**) Reserve Capacity Mechanism (**RCM**) and the impact of changes to the WEM Market Rules¹ resulting from the Energy Market Review (**EMR**). Our recommendations and attached responses to the questions posed by the ERA in the WEM Discussion Paper are made in the context of the core objectives of the Wholesale Market, as set out below.

WEM Market Review Core Objectives	
1.	Promoting the economically efficient, safe and reliable production and supply of electricity and electricity related services
2.	Encouraging competition among generators and retailers, including facilitating efficient entry of new competitors
3.	Avoiding discrimination against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or reduce overall greenhouse gas emissions
4.	Minimizing the long-term cost of electricity supplied to customers; and
5.	Encouraging measures to manage the amount of electricity used and when it is used

Table 1

¹ “Final Report: Reforms to the Reserve Capacity Mechanism”, Department of Finance, Public Utilities Office, April 2016

To meet these objectives decisive actions are required by the WA Government to provide certainty and restore the private sector's confidence and willingness to invest in the WEM. Private sector participation is vital for the creation and maintenance of a competitive Western Australian energy market. In setting Public policy the impact on the WEM's long term market attractiveness must be considered as damaging consequences may not be readily cured by reversing policy at a later stage.

This submission argues against wholesale changes to the RCM and encourages the ERA to recommend in its final 2016/17 WEM report that the Minister for Energy cancel the previously proposed changes² until there has been the opportunity to properly review the WEM as a whole³. Due to the integrated nature of the Balancing (Energy) Market and RCM, the proposed RCM changes were inappropriate and did not address the issue of excess capacity. Importantly, we believe that the EMR did not properly consider the damaging commercial implications for the private sector and the impact on its funding entering or indeed remaining invested, in the South West Interconnected System (**SWIS**).

While a historical argument may have been with significant excess capacity there was less need for the Government to be concerned with the private sector's willingness to invest in WA, this is no longer the case. Encouragingly in the last twelve months the WEM has seen substantial inefficient excess capacity exit the market.

Greater private sector participation should be incorporated into the decision making process. The Steering Committee mandated to overview the EMR was represented predominantly by Government departments and State owned utilities. We are encouraged by recent public comments made by the Minister for Energy that indicate a priority will be given to including wider industry consultation in any ongoing review of the WEM and the RCM.

1.2 Background

Merredin Energy owns and operates the 82 MW Merredin Energy Power Station peaking power station ("**MEPS**"), located near the town of Merredin.

MEPS is a modern and efficient generator commissioned on time and on budget for a total cost of \$90 million in 2012. With an operating life of 25 years it is a critical component of the **WEM** that provides grid stability, particularly to the Eastern Goldfields. MEPS is capable of rapid and remote start up to supply electricity to the SWIS during periods of peak demand and provides 1.5 per cent of total generation capacity. MEPS is the critical last line of defence against energy blackouts for consumers in the SWIS from both a generation and network support perspective.

The importance of MEPS as an efficient peak generator has greatly increased with the confirmed closure of 436 MW of Synergy generation capacity⁴, including the West Kalgoorlie 62 MW generators.

² As set out in "Final Report: Reforms to the Reserve Capacity Mechanism, Electricity Market Review", Department of Finance, Public Utilities Office 7 April 2016

³ We note that the Minister for Energy intends to defer the auction as reported following a presentation made at the Energy in WA Conference on 23 August 2017

⁴ Media Statement 5 May 2017, Minister for Energy. Includes the retirement of 436MW nameplate capacity (Muja AB (240MW), Mungarra gas turbine (113MW), West Kalgoorlie (62MW) and Kwinana gas turbine (21MW)) totalling approximately 387 MW of Capacity Credits

The vast majority of near-term new generation in the WEM will be fueled from renewable sources. This trend is supported by social pressures and Federal Government carbon reduction financial incentives. To optimize the cost of energy in the SWIS with an increasing proportion of intermittent, unreliable wind and solar electricity generation there is less need for baseload power production and much greater requirement for rapid response peak generation capacity such as MEPS. It is of great importance that the Market Rules encourage the retention and addition of peak generation.

1.3 Key Recommendations for WEM RCM Reform

To meet the core objectives of the Western Australian Wholesale Market, the following key actions should be taken.

- Merredin Energy’s preference is that the State cancel all the EMR Committee’s proposed changes to the RCM. At the very least, we consider the State should cancel the proposed Capacity Auction. While we believe the auction should be cancelled for the reasons set out below, we support the position proposed by the Minister of Energy in recent public statements⁵ to defer the Capacity Auction until 2021 at the earliest whilst wider ranging industry consultation occurs.
 - The longer-term expectation of a deferred Capacity Auction will continue to create continuing uncertainty and will likely greatly detract the prospects of any private sector investment in new merchant peaking capacity generation. The result will be that the required investment in additional peak generation will only come in under State support or guarantee.
 - The proposed Capacity Auction⁶ is too complicated and uncertain for the small, isolated and peaky WEM. In Merredin Energy’s view it is not possible to operate an efficient Capacity Auction in the WEM due to its concentrated nature. Using a market the size of the PJM⁷ in the United States as a model for a WEM Auction regime is inappropriate given the difference in scale, market and load profiles.
 - The PJM has approximately 30 times the amount of generation capacity in the WEM. Any overbidding or underbidding of the size of the largest generating unit in the WEM of 300MW would have a marginal effect on the level of the PJM excess capacity price, while the addition or removal of this amount would tip the WEM’s RCP into free surge or free fall. With a single state owned entity, Synergy, controlling approximately 75% - 80% of capacity in the WEM, it will be the only real bidder in any auction.
 - Even after acknowledging the complex market power mitigation measures that would be required to be put in place before the introduction of an Auction regime, it will be extremely difficult to achieve an efficient auction outcome with a dominant bidder.
 - AEMO’s “2017 Electricity Statement of Opportunities” report concludes that WA will require investment in new power generation by 2021 and private-sector investment will be key in ensuring provision of new generation capacity.

⁵ As reported following a presentation made by the Minister for Energy, the Hon. Ben Wyatt, at the Energy in WA Conference on 23 August 2017

⁶ As set out in “Reserve Capacity Auction – Final Design and Implementation”, Department of Finance, Public Utilities Office, 23 January 2017

⁷ The PJM services 65 million people on the east coast of North America (Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia). Peak demand is in excess of 150 MW.

- Additional peaking generation and/or battery storage will be required to balance increasing renewable and intermittent energy generation in the WEM if WA is to avoid blackouts as recently experienced in South Australia.
 - The auction mechanism is unlikely to be bankable on a project finance basis and the steepening transitional Reserve Capacity Price (“RCP”) path constitutes an unfair risk allocation between generators and consumers. This would exacerbate the current level of price volatility and deter private sector investment in essential infrastructure over the long-term.
 - If the EMR proposed changes to the RCM are implemented, private sector participation will be limited and the State will, by default, be required to underwrite new generation through Synergy.
- Retain the changes to the Market Rules in relation to Demand Side Management (DSM)
 - Harmonisation of DSM with real physical generation to provide a fair competitive footing is extremely difficult. Merredin Energy considers that DSM should be paid based on delivery of energy and not in the same manner as actual generators.
 - DSM should be accorded much higher than current Balancing Energy Price caps to reflect its mainly variable cost based structure compared to the fixed cost based structure of generation capacity.
 - Provide clarity on the pricing of Capacity Credits to help RCM stability.
 - The Transition Period, with its progressively steepening pricing curves, was designed to encourage inefficient capacity to exit. This reduction has already occurred and the Transition Period is now redundant. The withdrawal of DSM and the imminent withdrawal of the 436 MW of Synergy capacity will bring the market closer to equilibrium (from 23% in the 2015-16 Capacity Year to approximately 5% in the 2018-19 Capacity Year).
 - Such rapid withdrawal of capacity by itself demonstrates that the excess (mainly baseload) capacity in the WEM is a product of past energy policy that allowed Verve Energy to firstly retain old plant that should have been retired following the failure to win Synergy supply bids against the private sector, and secondly refurbish the very old and inefficient Muja AB plant, predominantly to earn capacity payments (a capacity play rather than for any productive reason behind the refurbishment).
 - Our strong preference is to keep the -1 slope, but have the 85% discount factor (applied to Benchmark Reserve Capacity Price (BRCP) to derive the RCP) removed as BRCP is already determined to be the efficient cost to build and operate a benchmark peaking power station. The 85% factor means that no new peaking plant investment would recover its cost of capital.⁸
 - The private sector requires certainty. If any changes are to be made to the Price Curve, then the State should adopt as a new and permanent single Price Curve from the 2018-19 Capacity Year onwards, being the Transition Curve for the 2017-18 Year with a slope of -3.75.

⁸ The PUO stated in its “Reserve Capacity Auction – Final Design and Implementation”, report that a design objective of the Capacity Auction was to provide the marginal capacity supplier with the BRCP on average. The Price Cap under the previous rules was a maximum of 85% of the BRCP and is set at 110% of the BRCP in the Transition Stage Market Rules.

- It is not reasonable and is unfair to generators to retain the transitional RCP path given the deferral of the Capacity Auction. As RCP would decline each year from October 2017 until September 2024 even if BRCP and the level of excess capacity in the market were to remain constant.
 - Notwithstanding the timing of this submission and the final ERA report, Merredin Energy considers the 2017-18 Transition Price Curve should not be adopted until the 2018-19 Capacity Year as this was designed to drive out capacity that has already either exited or is committed to exit the WEM.
 - The Reserve Capacity Price for the 2017-18 Capacity Year should be determined using the Transition Price Curve for that year excluding the Synergy 436 MW of scheduled capacity retirement that will exit the market by 1 October 2018.
- The private sector needs to be supplied with certainty if it is to invest in the WEM. We encourage the ERA to support this fundamental commercial objective and ensure that any changes provide long term certainty and not be a pre-cursor to further lengthy and uncertain ongoing WEM reviews.
 - Any streamlining of the Market Rules, including the RCM and network access models, should include consultation with the broader industry as foreshadowed by the Minister for Energy in recent public statements.

In addition to these key recommendations, we have provided a response to the questions raised in the Discussion Paper that are most relevant to Merredin Energy in the attachment below.

We appreciate the opportunity to make this submission and are willing to provide any further information that the Economic Regulation Authority might request to assist it in finalizing its report to the Minister for Energy.

Yours Sincerely

Jon Biese

Chairman
Merredin Energy

Lindsay Ward

Chief Executive Officer and Director
Merredin Energy

Attachment One
Response to Questions

1. Based on the approach and focus for the 2016/17 WEM Report to the Minister, are there any other considerations not covered by this discussion paper that are fundamental to an assessment of the effectiveness of the operation of the WEM in meeting market objectives? If so, what are they and why should the ERA address them in its report?

Merredin Energy encourages the ERA to give full consideration to the commercial implications of the proposed EMR changes in light of the WEM Market Review Core Objectives as set out in *Table 1*, in particular the objective ***“encouraging competition among generators and retailers, including facilitating efficient entry of new competitors”***.

Merredin Energy encourages greater consultation with industry, including operators and financiers, to understand how best to provide the confidence and the required certainty required by the private sector to make long term investment decisions. While tempered slightly by recent comments by the Minister for Energy on his intentions to improve competition and efficiency in the WEM, there remains a high level of market uncertainty that is having a detrimental impact on the ability for the WEM to retain and attract private sector investment.

Merredin Energy is not supportive of the proposed Capacity Auction. We believe medium to longer term pricing certainty is required if private sector investment in capacity is to be made in Western Australia. The capacity auction as proposed would only deliver a single year of price certainty, three years in advance and this will prevent project financing of new capacity with payback periods of 15 years or more.

Under the previous Market Rules, the RCP price signal has not led to any new plant being built since the MEPS investment decision was made in 2011. This demonstrates that the current RCM regime has worked effectively and not contributed to any new capacity being built over the past 6 years. Given that none of the specific attributes (size, redundancy, competition) of the WA market have changed, we believe the best course of action includes minor adjustments and improvements to the existing capacity regime rather than major reform.

The announced changes to the WEM RCM have met their purpose. Excess capacity has left the market and there is no need for a transition period to an auction that we do not believe is feasible in the concentrated and peaky WEM. Instead, if there is to be any change to the pricing curve, we would encourage the adoption of the 2017-18 Transition Curve as the fixed curve for the foreseeable future.

We are supportive of the changes to the treatment of DSM but would encourage DSM to be paid based on actual supply provided rather than in the same manner as generation.

Given the changing nature of the market with increasing renewable energy generation and the likely take-up of storage options, Merredin Energy would support medium to longer term changes to the RCM to apply differential pricing for the supply of capacity from base load, mid merit and peak generators.

3. Should some of the reforms identified above be prioritised? If so, please explain which ones and why.

Merredin Energy does not support the proposed Capacity Auction for many reasons, not least the inability for an efficient auction to be held in the concentrated market structure of the WEM.

- Merredin Energy considers that an efficient auction cannot be held with only one real bidder, that being Synergy.
- Notwithstanding any market power mitigation factors included in any final auction design, a very real risk is that Synergy as the dominant market participant with approximately 75-80% of generated and contracted WEM capacity will be the only bidder in the auction and consequently the auction clearing RCP price may be set by older, inefficient and more expensive Synergy generators.
- Other more efficient but smaller capacity suppliers such as Merredin Energy will be forced to become price takers and the theoretical auction objective of marginal price discovery will not be achieved.
- A wide range of auction outcomes is possible including the possibility of capacity prices being set both significantly higher or lower than under the previous Market Rules. Where lower, this increases risk to longer term capacity supply where critical plant such as MEPS may be forced to withdraw from the WEM.

The current capacity scheme has been successful in attracting sufficient investment in capacity and maintaining reliability standards (which has been a challenge in other Australian States) at an efficient cost for the end consumer. In combination with the balancing market, it has ensured lower energy price volatility for end consumers in WA.

Merredin Energy in principle supports any initiatives that improve market competition including full retail contestability, changes in the way concessions and subsidies are administered and changes to the Tariff Adjustment Payment and Tariff Equalisation Contributions.

5. Do interested parties have concerns around the proposed market power mitigation measures in the transitional capacity pricing arrangements and/or in a future capacity auction?
- Are there any situations where such measures will be ineffective and if so, why?
 - What alternative market power mitigation mechanisms could be considered?

Merredin Energy considers the proposed Capacity Auction is far too complicated for the WEM given the small, isolated and peaky nature of the Western Australian electricity market. Notwithstanding any market power mitigation factors that may be included, we do not consider it feasible to transpose auction mechanisms designed for much larger and competitive markets such as the 130,000 MW PJM market and ISO-NE (New England) electricity markets to the 5,000 MW WEM with its small size and market concentration, with Synergy controlling approximately 75 - 80% of generation either through its own or contracted capacity.

The design of any Capacity Auction rules is fraught with complexity to accommodate the WEM structure and is simply not appropriate to be implemented in the WEM:

- Auction rules are yet to be determined and will be subject to ongoing refinement⁹.
 - As acknowledged by the PUO, considerable design modification is likely in the initial period of any auction. With the announced deferral of the proposed Capacity Auction to at least 2021, if at all, market uncertainty will prevail for at least the next four to five years, and if the auction is introduced will continue thereafter for many years while any auction rules are fine-tuned.
- The market will be unable to attract funding for new peak capacity from the private sector:
 - The future RCP arising from a capacity auction is unknown and is expected to be highly variable, certainly in the short to medium term. The lack of any degree of price certainty will increase the cost of both debt and equity finance and greatly reduce the appetite for private sector participation in the WEM.
 - New peaking plants typically require capital payback over a 15 year period. At best the Capacity Auction will provide just one year of price certainty for delivery of capacity three years in advance.

⁹ Market guidance on the Capacity Auction design is limited to the publications by the PUO consisting of “Position Paper on Reforms to the Reserve Capacity Mechanism”, 3 Dec 2015 and “Reserve Capacity Auction – Final Design and Implementation Department of Finance”, 23 January 2017.

- The Capacity Auction Threshold Price, intended to remove administrative burden and the need to confirm bid prices are reflective of the capacity cost, will increase complexity and increase the cost of funding generation:
 - The proposed Threshold Price, which under preliminary PUO guidelines 80% of generators by capacity will be required to bid under, will require a second administrated price to be determined by the AEMO in addition to the Benchmark Reserve Capacity Price (**BRCP**), adding to the complexity of the overall process.
 - The Threshold Price will be the price that financiers, particularly debt providers, will adopt in banking lending case financial models. This will lead to greater conservatism in forecast revenue and therefore lower debt gearing levels that will further increase the cost of capital for new projects.

11. In response to an increasing level of intermittent generation, what planning and coordination arrangements need to be established or strengthened to ensure all aspects of effective WEM operation are considered; including policy, operational efficiency, market development and customer engagement and protection?

As acknowledged by the ERA, increasing WEM generation from intermittent wind and solar generators will increase the need for peaking generation capacity in the WEM to avoid the problems experienced in South Australia and the NEM more broadly.

The WEM today has an excess of baseload capacity and more than sufficient mid-merit generation. Near to medium term additional generation will be wind and solar, that must be backed by storage and peaking generation to provide system security. Increasing generation from intermittent renewable energy sources will require additional peaking generation for the peak load periods likely to occur on hot and windless summer later afternoons and early evenings when air-conditioning load is at its peak and solar and wind generation is not available.

Changes to the RCM and other Market Rules need to be made with the objective being to encourage private sector participation. If the private sector is unwilling to participate in the WEM peaking capacity on a merchant basis, the supply of new peaking or storage capacity will fall either directly or indirectly to the State via Synergy, and this will require additional government funding and increase Synergy's market dominance to the detriment of the energy customer.

13. The ERA is interested in stakeholder views on arrangements for oversight and/or coordination of planning and market development in the WEM.

Merredin Energy's very strong view is that certainty and stability of market rules and pricing is required if market confidence is to be restored and private sector finance is to be encouraged to re-enter the WEM. Accordingly, any changes made by the Minister to the Market Rules should be aimed at medium to longer term stability. In our view, the announcement of a further in-depth comprehensive Energy Market Review would be very detrimental to the market

Merredin Energy notes the Steering Committee for the previous ERM included only representatives of the public service, including amongst others the Public Utilities Office (**PUO**), AEMO, and the State owned operating entities Western Power and Synergy. We support the recent public statements made by the Minister for Energy that the broader private sector should be included in any streamlined review process to determine any subsequent changes to the RCM.

In the medium to longer term, Merredin Energy is supportive of differential pricing for baseload/mid-merit versus peaking capacity.

15. Although reforms to address excess generation capacity have not been in operation for long, do Market Participants see this as improving the effectiveness of the market? If so, how is this demonstrated?
16. Are there any concerns stakeholders have that the ERA should consider when it assesses the effectiveness of the Reserve Capacity Mechanism?

The Capacity Auction should be cancelled to restore certainty to the WEM. Once the Auction is cancelled, the Transition Phase is redundant. The purpose of the Transition Stage was to drive out capacity in advance of the proposed Capacity Auction. The objectives of the Transition market have already been achieved:

- The withdrawal of notional DSM capacity¹⁰ and the excess and inefficient Synergy Capacity is confirmed to exit by 1 October 2018, when surplus capacity will fall to about 5%. Consequently, the original purpose of the Transition period is now redundant
- The Transition rules will unfairly punish merchant participants in the 2017-18 Capacity Year prior to when exit of the Synergy 436 MW of old and inefficient capacity has been confirmed to occur by the end of that Capacity Year but not yet occurred

The change to the historical Reserve Capacity Price curve from the -1 to a steeper slope is not required or justifiable given these capacity withdrawals post the publication of the final ERM RCM recommendations in April 2016 have brought the market close to balance.

The ERM's recommended Transition period was designed to drive out surplus inefficient capacity in advance of the proposed Capacity Auction. To avoid market "shock" the ERM recommended RCP pricing formulae is to be altered from the current -1 slope to a -7 slope over 7 years. The steepening of the slopes each year was intended to drive surplus capacity out of the WEM, and the Capacity Auction regime was to be triggered when excess capacity falls to 5 – 6%.

With the confirmation of the exit of 436MW of capacity from Synergy and the changes to DSM rules, the reduction in market excess capacity to 5-6% has already been achieved from capacity year 2018-19 onwards. Forecast excess capacity will fall from 14% in 2017-18 (pre 436 MW of capacity exit) to approximately 5% in 2018-19, when the Capacity Auction would be triggered for delivery three years ahead in 2021-22.

The Transitional price curve will bring volatility to the capacity price for Merredin Energy and other merchant generators in the market, particularly in 2017-18 when MEPS will be financially disadvantaged for lingering excess capacity in the market, which has been caused by the previous decisions by the State to re commission old and outdated coal generators (i.e. Muja A/B).

Merredin Energy believes this volatility will make it difficult to refinance MEPS, with lenders requiring a far greater level of certainty in relation to capacity payments

¹⁰ Of the total 560 MW of DSM capacity provided in 2016-17 Capacity Year, 424 MW of DSM has already left the WEM leaving just 106 MW of DSM in the 2017-18 Capacity Year, reducing excess capacity from 23% to an expected 14% in the 2017-18 Capacity Year post the exit of the 436 MW of Synergy generation (approximately 387 MW Capacity Credits).

As a final point, Merredin Energy wants to draw attention to the fact that while there is the need for sufficiently attractive capacity prices to encourage marginal peak load generation to enter and remain in the WEM, this does not mean that the overall cost of energy should increase.

The recent EMR focused largely on the stand alone cost of the insurance policy provided by the RCM and not in the broader context of total delivered energy. In Merredin Energy's opinion capacity prices should not be considered in isolation to the overall cost of delivered electricity to end use customers that includes energy, capacity and Federal government carbon reduction elements such as large scale generation certificates (**LGCs**).

Base load and mid merit generators receive both energy and capacity revenue. Renewable projects receive lower mix of capacity payments but also benefit from LGCs. In the medium to longer term the split in revenue for these generators from capacity, energy and green prices will rebalance to provide the same economic return. If an artificially low capacity price is set, then these generators can recoup their cost of capital through a higher energy price. Peak generators that under the market design of the WEM receive the bulk of their revenue for the provision of capacity need sufficient capacity prices to meet their cost of capital and to provide the system security the market requires.

The changes to the RCM, designed to drive out capacity (which has already occurred), will punish the peaking generators to a level such that no future private sector merchant peak generators will likely be built to service the WEM, but will have a limited impact on baseload and mid merit generators which are capable of rebalancing revenue in at least the medium term. This removal of peaking capacity has the potential to cause system instability and a lack of energy security in times of high energy demand.
