

Submission towards ERA 2016/17 Wholesale
Electricity Market Report to the Minister

23 August 17



Executive Summary

There are three critical areas that require urgent attention if the wholesale electricity market is to flourish and allow the same degree of customer choice as we are now seeing in the gas market. The first of these is the development of a competitive wholesale trading market providing a broad suite of electricity supply and hedge contracts. The Standard Products go some small way towards this but forcing Synergy to effectively underwrite its competitors places it in a conflicted position with no incentive to establish the broad range of products needed to support an efficient market. Retaining Synergy as a balanced gentailer restricts the potential for other generators and retailers to develop their positions in the market. It also locks Synergy into a defensive, no-win future position with limited opportunity to increase its efficiency and reduce government subsidies.

The second major area that must be addressed is the market systems. Legislative changes were expected to move access to the Western Power grid to a constrained basis with the accompanying introduction of the NEM constrained access dispatch model. This would have also brought shorter gate closure, co-optimisation of electricity and ancillary services and enhanced settlement. Failure of this legislation has left the WEM with outdated systems that will not efficiently support continued introduction of intermittent generation, both in front of and behind the meter, or fast response generating plant and storage systems.

Much effort has been expended on development of the reserve capacity auction and the aggressive reserve capacity price reductions through the “Lantau” curve. As mechanisms to encourage investment of appropriate new generation and encourage retirement of older less efficient plant these approaches are failures. Potential investors, and the four major banks, have explicitly advised that they will not support further investment in conventional generation and older plant has only exited the market by government fiat. The reserve capacity mechanism needs to be completely re-worked and, because of the long lead times required to secure Western Power network access approvals, this needs to be done promptly to limit the likelihood of future capacity shortfalls. The alternative is that the government will be required to underwrite the bulk of new or replacement conventional generation plant.

Perth Energy considers that these matters are fundamental to the effectiveness of any other proposed market changes and, if left unattended, will quickly force government to make sub-optimal solutions that will go counter to its objectives of minimising electricity price increases, minimising Synergy’s subsidies and offering customers choice of provider. This submission therefore focuses on these but does also address some of the other matters raised in the Authority’s Discussion Paper.

Wholesale Trading Market

Gas customers in Western Australia are currently benefitting from substantially lower prices as a result of effective market choice. This is across the whole market with domestic customers seeing a reduction of 20% in their gas costs combined with imaginative supply initiatives. Six substantial players now hold gas licences for the south west region yet when the market was initially opened up a few years ago no new entrants sought to compete with Alinta.



The principal catalyst for change in mass-market gas supply was the development of a dynamic market at the wholesale level with numerous providers supplying competing offers to retailers. Once retailers were able to secure firm gas supplies at competitive prices they could make offers to end use customers knowing that these were backed by secure supply at known prices. In the electricity market the bulk of electricity is locked up in contracts or internal trades with only a minimal quantity available to trade externally. The Balancing Market is highly volatile and risk management tools such as hedges are not obtainable so participants are effectively forced to be gentailers and to closely balance their sales with generation capacity to manage their risk to an acceptable level.

Unless the industry structure is reformed there can be no significant development of the electricity market. Without change it is likely that existing participants will continue to hold their current market shares, participation by new entrants will only be around the edges and any move to full retail deregulation will be ineffective thus not delivering the desired reductions in cost for WA families and small businesses.

Perth Energy considers that the most effective way to establish a trading market is to separate Synergy into two entities each with a substantial imbalance between their generation and load. For example, one entity could hold all of Synergy's existing gas fired generating plant and gas-based power purchase agreements (PPAs) plus all contracts to supply contestable customers. The second entity could hold Synergy's coal fired power assets, windfarms and wind-based PPAs while supplying the existing franchise customer base. Each entity would need to trade substantial quantities of energy between themselves and with other market participants providing the base for an effective wholesale trading market. The market itself could be operated by the ASX, like the NEM market, or another entity.

Market IT Systems

When the current dispatch system was put in place the majority of power stations were conventional gas or coal fired units, there was very little intermittent load or generation on the system and the vast bulk of generation was in the hands of one entity. Since that time there have been numerous significant changes including:

- The high penetration of solar panels which can lead to load swings of several hundred megawatts within very short timeframes;
- A large quantity of low inertia, intermittent generation is now in place;
- Increased quantities of load following ancillary services are required to accommodate these intermittent loads and generators;
- Synergy's power stations are dispatched as a portfolio rather than as individual power stations; and
- Independent power stations make up a substantial share of installed capacity.

The existing dispatch system struggles to accommodate these changes. As indicated by the ERA considerable manual intervention is required to operate the system and this leads to inefficiencies which could, with more appropriate IT systems, be driven out. For example, AEMO's systems in the NEM dispatch plant in near-real time whereas in WA plants must submit their bids two hours before real-time.



This restricts the system's ability to respond to the types of load changes that are now occurring and will worsen as renewables increase their contribution.

In addition the 70 day lead time on settlement in the WEM is a function of IT and compares unfavourably with the 30 day settlement of the NEM, creating large prudential requirements for retail market participants, and creating a barrier to entry for new retail participants.

Reserve Capacity Auction

The focus on the Reserve Capacity Market (RCM) during the past few years has been to reduce the capacity excess, which is perceived as contributing to higher retail prices, and establishing a market based price through an auction. The most recent Statement of Opportunities has indicated that a small amount of new capacity will be required in 2021/22 with further capacity required thereafter. New replacement capacity will also be required if older plant is to be replaced or if more fast response plant is required to support further renewables investment.

Given that the lead time for establishing network access is currently around four years from commencement of network studies, and developers will need a year or so to secure all their required financial commitments before starting the network access process, the emphasis over the next few years will be on encouraging developers to enter the market to avoid a shortfall. However, the changes made to the RCM have driven potential investors and financiers away and, unless changes are made promptly, new capacity is going to have to be underwritten by the Government.

Failure of the RCM reform process has been driven by two incorrect assumptions. The first was that retail customers have been carrying the full cost of excess capacity through higher electricity prices. It is true that customers have been carrying some of this cost burden but substantial shares are also being carried by:

- Generators who receive lower prices for their capacity credits as a result of the reduced reserve capacity price; and
- Those retailers who had contracted to buy capacity credits at a higher fixed price and were unable to pass those costs through to customers because of competition.

The second failure was to think that reducing reserve capacity payments to generators would force plants from the market. A large proportion of a generator's costs are sunk and cannot be recovered so the RCP can sink to very low levels, probably well below \$50,000 per MW per year, before the plant stops making enough money to pay its fixed operating costs. The plant may well have been repossessed by its financiers at that stage but while it continues to cover its cash costs the plant will stay on line. Ironically, older power stations are generally better able to withstand low prices due to their written down book and refinancing values than newer plant that is still carrying major financing costs.

Investors have been encouraged into the market on the expectation that they will make a fair return over the economic life of their power stations. Their investment decisions have been undermined by changes in the way that the Maximum Reserve Capacity Price is calculated and by the aggressive price reductions that will come from the "Lantau" curve. These decisions, and the move to an auction, have



led all four major banks to advise that they will not support further investment in conventional generation in the WEM. Existing market participants have also advised that they are not prepared to invest further without government backed power purchase agreements.

Development of the auction has failed to deliver a market based price mechanism. The proposed approach of making bids against a pre-defined price-supply curve, coupled with strong anti-market power provisions, is no more than an administered pricing mechanism. It will be more expensive for both AEMO and market participants than the current process but will not deliver a better outcome. As such it conflicts with market objectives rather than supporting them.

Perth Energy recommends that the reserve capacity auction needs to be abandoned and that the RCM needs to be reworked. It needs to ensure that investors can receive a fair return commensurate with their risks over the expected economic life of their plant – say the first 20 years. More consideration needs to be given to signalling to older, less efficient plant that it should be closed.

Other matters from the Discussion Paper

Synergy Portfolio Bidding – Page 5

Perth Energy agrees that directing Synergy to bid its generating plant individually into the market would have benefits in terms of greater transparency in respect to short run marginal prices. This would prevent System Management using the Synergy portfolio for load following without appropriate compensation but also force Synergy to accurately hedge its retail sales.

Perth Energy also notes that Synergy has claimed in the press that it will require expenditure of \$40 million for them to be able to move to facility bidding. This is preposterous. Synergy already has the necessary systems and staff to develop the bids and re-bids that are included within their portfolio bids. While they do not have separate export meters at individual power stations their SCADA-based metering is currently considered sufficiently accurate for them to participate in the market. Their additional costs should only be appropriate interfacing to AEMO's systems plus some extra trading and analysis capability.

Co-optimised dispatch – Page 5

Perth Energy supports moves towards co-optimising dispatch of electricity and ancillary services.

Market Power Mitigation – Page 6

The briefing given to market participants by the Department of Finance on 5 December 2013 (https://www.finance.wa.gov.au/cms/uploadedFiles/Public_Utility_Office/Synergy_and_Verve_Energy_Merger/Market-participants-and-stakeholder-briefing-session-December-2013.pdf) outlined various regulatory approaches that were to be adopted. This advised that after 30 June 2017 *“a new transfer price will be established and will apply to non-contestable load and any remaining customers whose contracts were transferred as part of the merger”*. It also noted that *“There will be a transfer price*



associated with any deals entered into post 1 January 2014 – This transfer price will be based on the standardised and customised product regime”.

The ERA should examine Synergy’s transfer price arrangements to ensure that the post-July arrangements have been implemented in accordance with these commitments and that the pricing structure does not confer any competitive advantage through inappropriate assignment of costs.

Ring fencing is a key element in the regulatory approach. Perth Energy notes that the ring fencing adopted within Synergy is a mere shadow of the approach that the Australian Energy Regulator requires of other energy companies facing similar conflicts of interests. Perth Energy would prefer to see Synergy disaggregated to stimulate development of an effective wholesale trading market but, if the regulatory approach is to be retained, then Synergy should be required to implement serious ring fencing including:

- Development and approval by the ERA of a cost allocation methodology that ensures there all common costs are correctly assigned between contestable and franchise customers;
- Maintenance and publication of separate accounts for its ring fenced businesses;
- Full ring fencing of its contestable customer business such that electricity purchases and sales for this sector are totally separated from electricity purchases and sales for the franchise market;
- Registers of staff that are assigned to the various ring fenced entities; and
- Preferably legal separation of the entities.

Short Run Marginal Costs – Page 7

Perth Energy considers that the ERA should more clearly define how short marginal costs (SRMC) are to be determined. In particular, an agreed methodology should be established for determining the level of start-up costs that should be allowed in the SRMC calculation per interval. Starting an industrial gas turbine, for example, is equivalent to several hours of operation so becomes a dominant cost when the plant is only started and run for a few hours. However, if the plant is brought on line and run for an extended period it may not be appropriate for the same 2-hour amortised starting cost to be included in the SRMC required to remain in service, i.e. if start costs are included in SRMC, then they should be representative of the actual running profile of the plant.

Misuse of Market Power - Page 7

The ERA notes that current civil penalty provisions may not deter market participants from misusing market power. Perth Energy questions the effectiveness of applying a civil penalty to Synergy should it ever be determined to have misused market power, because the cost would ultimately be imposed on to its shareholder, the Government, and through to customers or tax payers.

Perth Energy notes that Government has not followed through on reducing the buy-sell spread for Synergy’s Standard Product despite the ERA’s prior recommendations. Perth Energy considers that this argument should again be presented to Government as it is a crucial market power mitigation tool.



Generator Interim Access Arrangement – Page 12

The discussion Paper raises the issue that the GIA presents a non-level playing field because some generators have unconstrained access and some have constrained access. Perth Energy would turn this around and point out that this is the result of some generators making a substantial investment to upgrade transmission infrastructure while GIA generators are getting a “free ride”. GIA generators are being allowed to enter the market with lower up-front capital expenditure compared to other generators which may place them in a better commercial position.

Perth Energy is not against new generators coming into the market but considers that this needs to be on a fair basis. Western Power, through the GIA and through permitting run-back schemes, is granting a commercial advantage for some market participants. We acknowledge that the network is becoming increasingly constrained but resolution of this issue should not commercially disadvantage those generators that, in accordance with access requirements, were required to pay substantial sums of money to secure firm access.

Perth Energy is also concerned at the operations impact of the GIA. As noted elsewhere in the Discussion Paper, it is necessary from time-to-time for System Management to manually intervene in dispatch. The GIA adds a further complexity onto the dispatch process. It also brings more uncertainty into the market in that the dispatch stack may now vary during any given trading interval. This compounds the existing issues related to load forecasting errors and long gate closure.

Planning for increased levels of intermittent generation in the WEM – Page 13

Increased penetration by intermittent generators will have a number of profound impacts on the WA market and current systems and structure will make this harder to accommodate. We are already seeing substantial swings in demand due to changes in wind and changes in solar PV output. There is general agreement that fast start gas turbines and battery storage are suitable tools to accommodate these load swings. However, neither of these technologies will be able to effectively respond unless the WEM can reduce gate closure to near-real time. If this does not happen it will be necessary to substantially increase load following or continue relying on Synergy’s portfolio.

This is a further strong reason why the market systems need to be promptly brought up to a fit-for-service level. AEMO’s forecasting needs to be substantially improved though moving to real time dispatch would reduce this need.

As noted earlier in this submission, the RCM as currently structured will not encourage new investment in gas-fired plant and needs to be re-structured. Appropriate rules also need to be developed for batteries to be incorporated into the WEM with an open discussion as to how these are treated, will they get capacity credits and are they treated as unavailable during their charging cycle, are they to be treated as “generators” or as a “network asset” thus impacting on SWIS licencing requirements.

Government – Industry Communications

One of the problems not raised in the Discussion Paper is that the reform process over the past few years has been driven by government with only limited input permitted from industry. Working groups



were established but the process within these was that the Steering Committee would allocate subjects to be discussed thereby ensuring that only their agenda was considered. The Steering Committee comprised government agencies plus Synergy. This effectively entrenched its monopolistic position and prevented any consideration of significant change. Industry tried very hard to put its perspectives in key areas but eventually resorted to holding external meetings to develop its position.

The critical point of breakdown was the inclusion within the constrained network access legislation of a clause that shielded Western Power from any claims when firm access rights were to be taken from investors. This was perceived by some as sovereign risk. We now have a new Government but a critical consideration in assessing the effectiveness of the market is how well Government, its agencies and industry are actually communicating.

Implications of inaction

If changes are not made relatively soon there are likely to be a number of adverse impacts on the market and Government will be forced into actions that it may not wish to follow:

- There will be limited effective choice of supplier for most customers – a move to full retail choice could well fail in the same way that gas supply choice was a failure for many years;
- Government will find that it needs to support most new conventional generation through power purchase agreements or direct ownership;
- Unless batteries and gas fired plant can be dispatched in close-to-real-time it will be difficult for additional renewal generation to enter the market;
- Government will continue having to subsidise Synergy;
- At the same time, Synergy will be denied the opportunity to develop the skills and capabilities it needs as generation and storage technologies change – when change is eventually forced onto Synergy it would be far more painful for staff and the business;
- Without new IT systems other market changes will be less effective and, as technologies change, there is the possibility of a major crisis within the dispatch and settlement systems.



Perth Energy Pty Ltd

(08) 9420 0300
info@perthenergy.com.au
24th Floor, The Forrest Centre,
221 St Georges Tce, Perth WA 6000
ABN 39 087 386 445

perthenergy.com.au