

WA Major Energy Users (WAMEU)

Electricity Market Review

Response to Position Paper on Reforms to the Reserve Capacity Mechanism dated
3 December 2015

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energyXL

 Altus
ENERGY STRATEGIES

What is WAMEU?

WA Major Energy Users (**WAMEU**) is an energy market interest group for large energy users in WA.

WAMEU was established in 2007 to fund a consultant report into Western Power's Access Arrangement. The submission from WAMEU was one of few received from users by the Economic Regulation Authority (ERA) and contributed significantly to the debate. The exercise was repeated again in 2011, with a similar group of participants, for another Western Power network tariff re-set.

During previous reforms and already as this one starts, major users (those who pay the bills for energy in WA) often have little to no involvement in the discussions that shape the energy industry.

WAMEU is funded by major energy users that operate energy intensive businesses in WA and most recently made a submission in response to the Electricity Market Review Discussion Paper in September 2014.

WAMEU welcomes assistance from the Government of Western Australia in promoting and supporting participation from energy end-users in WA.

WA Major Energy Users (WAMEU) is supported by consultants energyXL and Altus Energy who have extensive experience in the WA energy industry.

Summary Response

The key focus of this submission by WAMEU is on the proposed differential payment of Demand Side Management (DSM) generation capacity in the market. DSM should receive the same capacity price as other capacity providers; this is a fundamental economic concept in energy markets.

DSM prevents unnecessary investment in inefficient capacity. Where a capital investment is made by industry (mining crushing plant, back-up generation for a hotel), providing DSM capacity leverages the investment cost with a benefit for the electricity market.

The proposal for a capacity auction when and if the supply of capacity becomes closer to balanced is supported with the caveat that it should be open to participation by end users on a non-discriminatory basis. As growth occurs in PV and renewable generation, it is perhaps unlikely that an auction will occur in the medium term if at all.

The proposal to further tighten the quality of DSM resources by altering the calculation of capacity contributed from 32 data points over the summer months to the 95th percentile of contribution during the highest 200 hours of grid load is supported on a qualified basis. This will reduce DSM resources by 220 MW (40%) according to the PUO calculations. This change must support the retention of payment of the full capacity price for DSM, and it appears that this change would also increase the average capacity price.

A proposal to amend the slope of the price decline for over-supply to negative 5 is supported. This on its own will reduce the capacity cost in the market to reflect the over-supply. It is somewhat arbitrary, but subsequently reducing capacity in the market will drive the price up again.

The combination of the previous two measures is posited to reduce the cost of capacity in the market by \$35 M per annum. This benefit will flow to retailers, not direct to customers. Industrial and SME customers which participate in DSM will see an increase in their net-cost of energy if the differential payment of DSM is progressed during the “transition period”.

It makes sense that the capacity price should be lower when there is excess capacity, and that as the price fell capacity may choose to exit the market if that price doesn't sustain it. To target a single segment of generation (DSM is generation) in a diverse system is a cynical move by the WA energy industry to increase the bottom-line energy cost for business while improving retailer margins.

Highest cost capacity should exit, not the lowest cost.

DSM is a WA Energy Market Success Story

DSM has enabled participation in the WA electricity market by industrial and SME customers, and deferred investment in physical generation capacity. There would currently be stranded power station assets if physical capacity had been added to the market.

Before the influx of PV on household rooftops, WA encouraged Demand Side Management to provide insurance capacity to the electricity grid. This capacity has not been overly-employed but has earned its way by ensuring that new fossil fuel plant wasn't built. PV has done the same (similar to DSM) and deferred the need for new utility-scale capacity.

The issue for the old-world utility industry is that as PV grows, their generation is not required and finds it harder to earn revenue. DSM capacity sits outside the energy utility space, and has become a target.

The combined capacity from DSM and PV is currently close to 1,000 MW. PV enables the domestic consumer to receive a discount on their power bill in much the same way that DSM participation can for an industrial or SME consumer. Power to the people?

EMR Process

The Electricity Market Review is a vehicle for delivering value to the WA government through reforms that are specifically targeted at delivering better financial outcomes for Synergy.

Targeting Demand Side Management (DSM) in the proposed changes to the Reserve Capacity Mechanism is a measure aimed directly at the industrial and SME consumers of energy in WA that participate in DSM to lower their overall energy costs as they seek to remain competitive in their respective industries.

It will be interesting to see the response to the position paper from the energy industry, particularly retailers which usually have a “customer's first” slogan of some type. Retailers stand to gain financially from the proposed changes (Synergy in particular).

The WA government owns the largest generator and retailer in WA (Synergy) and can also decide which reforms progress and which don't. They can alter the rules of the game, causing winners and losers.

The suggested changes are clearly designed to benefit Synergy. If the government likes them, the PUO will be instructed to implement them. The objective is still to reduce the government subsidy for Synergy's retail franchise over domestic consumers.

None of this breeds confidence in the process.

Selecting DSM (because it is outside the retail energy industry) and proposing it receive differential payment in the capacity market is a retrograde step.

Demand Side Management in Reserve Capacity

Many industrial consumers participate in the capacity market through DSM. This has been driven by the market mechanism enabling the hedging of capacity charges by offering DSM capacity. These are generally large block loads that are paid to respond to dispatch instructions from System Management. The performance is tested and non-performance has implications via penalties.

DSM was supported and promoted in earlier reforms, provides capex savings on power stations, enriches the market through greater diversity, encourages end-user participation in the market and is the lowest emission generation capacity available in the SWIS.

WAMEU strongly supports DSM as an equal participant in the capacity mechanism in the WEM.

The market should not discriminate against any particular capacity type. Wind and solar are not dispatch-able, they receive capacity payments related to their contribution to meeting peak demand. DSM is dispatch-able and should receive payment of the same capacity price as all market participants.

It is a fundamental market principle that all capacity should receive the same price. Citing different cost drivers misses the point. In fact, cost drivers are not the main game in regard to WA's capacity mechanism. Most generation is contracted based upon offtake agreements (Power Purchase Agreements, or PPA's) which return the costs of capital outlay and operation over the long term. This is not the same as a capacity payment, which is an artificial construct to ensure that all capacity not covered by an offtake agreement is paid, and that the cost of this is allocated to all retail customers.

Capacity revenue can be viewed as a rebate for companies that are the offtaker under a PPA, as by definition they purchase all the output from the plant. For example, Synergy would receive capacity payments for the PPA's it has with third party generators.

The energy price for DSM means that it will be among the last capacity to be dispatched. The provision of back-up capacity by generation plant may not be efficient as it will be needed relatively infrequently. DSM is best-placed to support reserve margin security.

The capital cost of a Water Corporation de-salination plant is extremely efficient when WA gets a water-production facility and a peaking power station at the same time. The DSM

capacity revenue rewards such a plant. The capital cost of a new build industrial plant (eg. Simcoa 3rd furnace) was in part justified as an investment in WA as opposed to elsewhere in the world through the contribution from DSM capacity payments.

The business community outside of the electricity industry in WA have made large capital decisions based on the WEM market design, specifically the ability to hedge capacity charges through offering DSM capacity. It is simply untrue to state that physical generation should be treated differently to DSM because physical generators have made a capital investment in generation but DSM providers have not.

What Impact on Synergy?

Synergy bears the capacity cost for the peakiest load in WA (its domestic franchise) and it under-recovers from these customers because the tariff is too low. Reducing the cost of capacity will therefore benefit the alignment of capacity cost for these customers, but will also impact Synergy's revenues for the PPA's.

The IRCR of the domestic franchise is probably the only part of the market where a pass – through of capacity charge does not occur because of the static (and outdated) bundled energy tariff used for domestic consumers.

Meanwhile, Synergy argue that they should be able to charge PV users for the network charges that are incurred on their behalf but not received from these customers because of the drop in their consumption from the grid and the bundled tariff not recovering fixed costs. WAMEU sympathises with Synergy on this, it is regrettable that a new tariff wasn't created when PV started to accommodate this predictable outcome.

Synergy benefits from PV actually reducing the quantum and growth of its IRCR, as the owner of the domestic franchise. All of the proposed reforms will benefit Synergy in the near term, at the expense of businesses in WA.

Reducing the Capacity Price

WAMEU supports the measures proposed to reduce the capacity cost, with a price curve sloping at negative 5. This administered change is logical and not discriminatory in its approach. The capacity price impacts on customer cost via their Individual Reserve Capacity Requirement (IRCR, the construct for load at system peak) and pays a small amount of generation (those without a bilateral).

The arguments about capital cost of various generation types are spurious. We know that all generation plant have different capital costs – the relationship to the capacity price in reserve capacity is not a direct one.

Is the capacity price the sole motivator for generation to be built? Most capacity providers will seek an offtake agreement to be able to debt finance their power station. It is perhaps only some distillate generators which have been willing to incur the cost of deploying a genset on the promise of capacity payments from the IMO.

Changing the DSM Business Model

The earliest DSM in WA pre-dates the WEM. Simcoa and Cockburn Cement have provided DSM since the late 1990's. The 'capacity price' was approximately \$100,000 per MW/year.

Not all DSM is the same. Aggregated portfolio programmes may not be as well-placed to support market objectives as large individual industrial loads.

Industrial loads should participate directly in the capacity market. They should be paid for their contribution at system peak to maintaining the reserve margin at the reserve capacity price. DSM providers should be registered with The Market Operator and the capacity payments for DSM made as an offset to their IRCR cost. This would enable portability of DSM for industrial capacity as the retailer that supplies the load would receive the net capacity charge after deducting for the capacity payment related to DSM.

Who Are the Winners From Differential Payment for DSM?

The cost of capacity is paid to providers by entities that use it. Retailers are required to cover the IRCR of their customers in aggregate.

Retailers all pay for capacity, and some own capacity through their own power stations or PPA's with generators. Each retailer will have a position on capacity purchased versus IRCR.

By definition the retail segment is a net buyer. DSM and a few merchant plant are the only entities that are not tied to retailers through PPA or internal bilateral. This short position held by retailers pays off through a reduction in the price and quantity.

Most customers will have pass-through provision for IRCR costs; others will have this built into the price with a risk premium added for its potential to increase.

Retailers may view payment outside of their group as "leakage" from the industry, and would probably be well-aligned in supporting the position put forward. They would rather someone else's capacity exit the market.

Does the energy industry exist to serve customers, or is it self-serving? The government has implemented change to bring about more competition in the provision of energy for the benefit of customers.

Retailers may deliver a message that customers come first, but if they support all of the proposed transition changes to DSM it doesn't appear to be about industrial and SME customers.

The Losers From The Differential Payment for DSM?

The biggest losers are industrial and SME energy users (those that pay the bills). There are 300 to 400 businesses in WA that receive Capacity Payments. These are in effect a discount on the electricity bill that keeps their costs down.

Reduced IRCR charges (for those with cost pass-through) will compensate for a small part of the loss of capacity revenue due to the proposed table 6.1 changes.

A quote in the AFR last year from Jennifer Hewitt about the RET debate touches the issue: “It’s actually businesses with large power bills that bear far more of the renewable energy impact. Yet their commercial interests never tend to attract much public sympathy until they actually close down, usually for a range of reasons.” (Source : “Epic energy battle blowin’ in the wind” AFR page 2, 1 Sept 2014)

These businesses will lose the effective discount on their power bill from participating in the energy industry, and retailers will be able to increase (or repair) their margins.

DSM Participation in WA is a Feature of Our Energy Market

WA has succeeded in creating an energy market where more retailers are competing to supply electricity to customers. The only piece missing is exposing the Synergy franchise over domestic consumers to competition.

Some of the elements of the WEM market design that are superior to the NEM are:

- Market price stability
- Cost reflective market prices in very competitive contestable segment
- Strong DSM participation
- Longer term customer contracts possible (10-15 years)
- Long term bilateral contacts
- Capacity price market signal for investment
- Risk hedging done with customer counterparties, less middlemen

Maximising end user involvement in the market through DSM is fundamental to a lowest cost, efficient electricity market. AEMO is concerned about the lack of DSM in the NEM and is looking at market rule changes to “*establish a new demand response mechanism in the wholesale market - option for demand side resources to participate in the wholesale market for electricity*” (Source: <http://www.aemc.gov.au/Major-Pages/Power-of-choice>).

Load curtailment (DSM) is offered to the capacity market of the WEM. Large industrials participating in DSM do so to reduce their overall energy cost in a way that benefits the market.

Reducing the capacity price to be reflective of over-supply is supported, as is the change to baseline DSM which will reduce DSM in the capacity market by an estimated 220 MW. These changes have an offsetting impact, as the capacity reduction will increase the price.

WAMEU does not support the differential payment of DSM capacity resources as proposed.

WAMEU Submission Feedback

Reform Objectives

The proposed reforms do not conform with the objective of “outcomes conducive to a least cost, sustainable delivery of capacity and energy to customers.”

Re-set of the price slope of capacity and re-set of baseline DSM are broadly acceptable, differential capacity price paid only to DSM is not acceptable.

Reform Principles

The reform to the slope of the price curve will meet the reform principles. Differential treatment of DSM with respect to capacity price paid does not.

Proposed Reforms

Introduction of the auction is to be triggered by a forecast of 5 to 6% of excess capacity in the year that the capacity price determined by the auction will have effect.

Support further consideration of the issues. It may be unwarranted given that the capacity price is not yet a key driver of behaviour (ie. the IRCR mechanism drives behaviour, not the price for customers if given the signal, and generators are paid via PPA for offtake to finance power stations).

The only time that the market “needed” to acquire Supplementary Reserve Capacity was at WEM market start. The IMO, realising its responsibility to ensure enough capacity in the WEM, ran a process and signed up additional capacity from DSM resources at no capacity cost. The IMO were specific that they would only agree to pay dispatch payments (energy equivalent). Many large DSM providers participated with the rationale that if they didn’t then they may be the feeder to be shut off if capacity was needed, without compensation. This was perhaps another motivator for large energy users to enter the market with DSM capacity.

It is incongruous that the Position Paper expresses concern about market instability caused by a zero price for capacity brought about by an auction while advocating paying close to zero for DSM capacity.

Implement changes in table 6.1

Qualified support of the changes in the table. This reduces DSM resources in the market by 220 MW from 550 MW (40% reduction) and aids the reduction of over-capacity in the market. Under the current design, and the proposed price curve for over-supply this will have the consequence of increasing the capacity price.

The first market design set DSM capacity at the IRCR, meaning that the median value during system peaks was used to determine both. This has been replaced by a calculation of Relevant Demand, taking 32 intervals of data over the months of summer.

The measures in the table firm up the capacity provided by DSM to the market and should ensure that the full capacity price continues to be paid for DSM with no differential treatment. The quantum of available hours is perhaps excessive, and the further difference in calculation of IRCR should be subjected to further analysis.

Implement the dynamic refunds proposal developed by the IMO

Supported

Implement the refunds recycling proposal developed by IMO with limited changes

Supported

Implement generator availability proposal developed by IMO with minimal changes

Supported

A single slope of the capacity curve of -5 for the duration of the transition period

Supported

Increase capacity price cap

Supported

Differential treatment of capacity payments for DSM

Not supported. The changes proposed to be implemented by table 6.1 reduce the amount of DSM capacity in the market.

There is no case for DSM to receive a lower capacity payment than the market price.

EnergyXL is an independent WA energy market consulting business with a small number of large Commercial & Industrial(C&I) customers.

energyXL assists its customers to manage risk and get the best deal possible in WA energy markets (electricity, gas and coal), and implements work packages for retailers and other market participants and stakeholders.

Paul Keay of energyXL has worked in the WA energy industry since 1998.

Paul spent 5 years at Western Power Retail (now Synergy) when competition started in the supply to C&I customers. Following this, Paul was Manager Energy Sales when Alinta entered the electricity market, contracting with C&I customers to underwrite investment in approx 670 MW of generation capacity in WA. He also sat on ERTF groups to develop the WEM, including the Reserve Capacity group.

Paul joined Premier Power in 2005 as Manager and developed this business from its beginnings as a start up electricity and gas trader supplying C&I customers. During this time, he was a Board Member of REMCo and had core involvement with coal sales with Premier Coal.

Paul previously worked in the European oil trading markets with Mobil and Phibro Salomon Brothers in London during the 1990s and designed the middle office risk management function for Texaco's natural gas trading business in the UK.

He holds an MBA (with Distinction) from Heriot Watt University in Edinburgh specialising in Financial Risk Management, and a Diploma from the AICD.



Altus Energy specialises in assisting major energy users in Eastern States to transition from vanilla retail energy buying to wholesale market participation to reduce costs.

Michael Williams of Altus Energy has more than thirty years experience working in energy intensive industries including iron, steel, ferroalloys, cement, quicklime, mining and waste derived biofuels.

Michael was instrumental in establishing one of Australia's largest cement makers' Adelaide Brighton, as an electricity spot market participant in the NEM and was instrumental in establishing Adelaide Brighton up as a foundation participant in the gas Short Term Trading Market (STTM) as a shipper and a self-contracting user. He has negotiated numerous electricity, gas commodity and gas shipping agreements in WA, NT, SA and NSW as an end-user.

Michael was previously Deputy Chair of the Electricity Consumers Coalition of SA (ECCSA), Deputy Chair of the Major Energy Users Inc. (MEU), Chair of the Cement Industry Federation (CIF) Energy Working Group, Chair of the Northern Territory Major Energy Users (NTMEU) and a Board Member of the Kwinana Industries Council (KIC).

Michael has a Bachelor of Engineering, a Bachelor of Economics and a Master of Applied Finance and Investment with his Thesis being "Electricity Price Risk Management".