
AEMC Forum

Generator Market Power Rule Change Proposal

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Major Energy Users

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About the Major Energy Users, Inc

- The Major Energy Users is a consumer advocacy group addressing energy issues
- It is highly focused on key issues that make a difference for large energy consumers
- The MEU comprises over 20 large energy using companies across the NEM and in WA and NT. Industries represented include:
 - Paper, pulp and cardboard (KCA, Visy, A3P)
 - Iron and steel
 - Cement and lime
 - Aluminium
 - Mining explosives
 - Tourism & accommodation
- The MEU focuses on the cost, quality, reliability and sustainability of energy supplies essential for the continuing operations of the members who have invested \$ billions to establish and maintain their facilities
- MEU subscribers have a major presence in regional centres throughout Australia
- MEU subscribers operate both in the spot and retail markets

The origins of the rule change proposal

- ❑ In January, February and March of 2008 the AGL owned Torrens Island Power Station TIPS priced its capacity on a number of days so that it “economically withdrew” capacity, requiring inefficient high cost open cycle gas turbine generators to supply the market.
- ❑ For example, on 18Feb08, TIPS went from earning ~\$67k/hr at 10 am selling 900 MW to over \$5.2m/hr at 4 pm despite halving its output, an increase of ~100 times!
- ❑ Even though the price reached near the market price cap 7 days in this period, there was significant spare capacity in the market (generation and interconnection), with a minimum of 15-20% reserve margin, and more on most days
- ❑ The MEU met with the AER to see what the regulator would do about this, but the AER advised that what had been done appeared to be within the rules

The outcome of this activity

- The outcome from just the seven days in Q1 of 2008 was a massive increase in the region's average annual volume weighted spot price (AAVWSP)
 - One half hour at MPC (then \$10,000/MWh) at 3000MW demand in 2008 adds \$1.12/MWh to the SA AAVWSP and there were 44 half hour periods when the spot price was at or near MPC in these three months, adding over \$45/MWh to the region's AAVWSP
 - Spot market customers (end users, retailers and generators needing backup) suffered significant losses
 - The fact that economic withdrawal was able to be repeated to spike the spot price in 2009 , 2010 and even 2011 indicates a systemic flaw in the market rules
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The impact of this activity

- For contract renewals for 2010, SA consumers saw a large reduction in the number of retailers prepared to make offers, and the offers that were available reflected 50% (and more) increases compared to previous contracts.
 - The risk in the SA market increased dramatically and generators and retailers had to secure higher priced risk protection
 - Some generation was built to provide physical hedges, not because there was a shortage
 - Retailers had to seek hedges from their competitor as AGL's TIPS has the largest base load generation
 - Some second tier retailers exited the market because they could not get hedges at rates which allowed them to compete
 - This all occurred because the rules allow the largest generator to increase spot prices by the exercise of its market power
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The substantive issues (1)

- ❑ The directions paper doesn't get to where the problem really lies
- ❑ Economic withdrawal only works when a dominant generator knows it must be dispatched to supply the region. It does this to increase its profitability at the expense of consumers
- ❑ Economic withdrawal is well recognised as a significant issue in electricity markets – in both energy only and capacity markets
- ❑ The AEMC and its consultant NERA are losing sight that what we are addressing is the ability of a small number of generators using a weakness in the rules as an opportunity to make money, and confusing this with economics
- ❑ The AEMC approach proposed is at odds with most experts (eg see Wolak for the NZ CC, 2009) who look at each half hour spot price

The substantive issues (2)

- ❑ A generator “economically withdrawing” capacity forces the market to be dispatched out of merit order (i.e. higher cost before lower cost generators), and therefore the dispatch is not efficient.
- ❑ Further, as only the dominant generators (the very largest in a region) have this ability, this contravenes competitive neutrality because not all generators can access this power – the others are effectively “price takers”
- ❑ The spot market is intended to provide a signal for new investment but exercise of market power distorts this signal, leading to inefficient investments
- ❑ So the market doesn’t work as it is intended
- ❑ The issue is really a structural one. Where there is no dominant generator (eg Victoria) there has been little or no exercise of market power yet the market works with adequate investment occurring. So the “missing money” debate is not relevant

So what are the key elements to look at?

- ❑ Firstly, ensuring dispatch is based on the most cost efficient generation first applies equally to energy only and capacity markets. The AEMC view that it is “more illuminating” to only look at other energy only markets for solutions is wrong and the much wider experience that is available is not being accessed.
- ❑ Secondly, the cause of the problem is related to the size of the largest generator relative to the regional market peak demand (ie the structural problem ERIG identified in its report).
 - ❑ In Victoria for instance the largest generator (LYA) can provide only 21% of the peak demand and there is little economic withdrawal
 - ❑ But in SA, TIPS can provide some 37% of the peak demand and economic withdrawal occurs frequently
- ❑ Thirdly, the fact that in Victoria there has seen significant investment in the absence of exercise of market power, shows that eliminating the exercise of market power does not deter needed investment
- ❑ Fourthly, the higher the MPC, the less time is needed for exercise of market power to cause major wealth transfers – this highlights the need for shorter timeframes of assessments as overseas regulators are doing.

Expert views on the issue

- ❑ A 2005 report prepared by Twomey et al under the guidance of Newbery looks at the various approaches used to assess market power. Importantly it does not see there is a difference between assessments in capacity and energy only markets – the AEMC only looks at energy only market experience
- ❑ The report examines a range of tools used to measure market power – market share, capacity/peak demand, Herfindahl, Pivotal Supplier and Residual Supply Indices, Residual Demand Analysis, Lerner and Price Cost Margin indices and net revenue and competitive benchmark analyses. Interestingly it does not identify an approach based on a yearly time frame as proposed by the AEMC but looks at much shorter periods.
- ❑ The NERA report does make reference to some of these tools but notes that it's scope precluded their assessment. NERA sees a year as the appropriate timeframe as this reflects the “demand cycle” but provides no other reasons
- ❑ Newbery advocates identifying “pivotal” generators before the event and by doing so aim to prevent the exercise of market power
- ❑ The “experts” approach is in stark contrast to the AEMC approach of “substantial market power” being when annual average wholesale price exceeds annual average regional LRMC which looks backwards at market power over the previous year

The AEMC approach has a number of problems

- ❑ There is a general view that prevention is better than cure with regard to exercise of market power and most market monitors and regulators look forward, towards prevention. The AEMC approach is ex post and therefore has the intractable problem of how to reimburse those harmed by it.
 - ❑ The AEMC approach presents major challenges for the regulator such as how to quantify “substantial market power”:
 - ❑ The wholesale price varies every 5 minutes, has changing proportions of spot to contract price and requires access to all contract prices and quantities
 - ❑ LRMC (and SRMC) in a region varies with the type and location of generation, so identification of regional LRMC is difficult
 - ❑ Using new entrant LRMC is questionable because with the exercise of market power, base load capacity is withdrawn and there is no shortage of supply
 - ❑ The AEMC approach does not provide a solution on maximising adherence to merit order dispatch, ensuring the rules maximise competitive neutrality or sending an accurate investment signal
 - ❑ All high prices will be caught by the AEMC approach and some of these are appropriate as they signal supply shortage.
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The MEU approach addresses most of the problems

- The focus is only on the times when there is potential for exercise of market power to occur – at all other times the market runs as it does now.
- The focus is only on a generator with the ability to exercise of market power – all other generators would not be constrained.
- The dominant generator is constrained to sell at the APC which delivers a significant premium over its total costs of production
- The assessment of the conditions under which dominance is assessed is made under normal market operating conditions. An unusual event does not impact this assessment
- The outcome provides:
 - Near merit order dispatch in the market
 - All generators effectively facing similar degrees of competition
 - Market signals reflecting only true shortages of supply
 - An incentive to prevent physical withdrawal
 - Needed investment would not be affected

Summary

- Attempting to address the issue in terms of “substantial market power” introduces a number of challenges and fails to address the key concerns (raised by the experts) of
 - Ensuring merit order of dispatch is achieved
 - Maximising maintenance of competitive neutrality
 - Ensuring the correct market signals are provided
 - In contrast the MEU approach achieves all of these by focusing on the cause of the problem
 - The AEMC approach introduces major difficulties in quantification and delivers an ex post assessment which does not allow reimbursement to those harmed
 - In contrast the MEU approach acts to prevent the action causing the problem while ensuring any constraint applied still retains profitable dispatch for the constrained generator
 - The risk of physical withdrawal of capacity is not prevented by the AEMC approach.
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