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Australian Energy Regulator
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Canberra ACT 2601

By email: wholesaleperformance@aer.gov.au

Dear Gavin

**Electricity wholesale market monitoring**
**Discussion Paper**

The Major Energy Users (MEU) welcomes the opportunity to provide its views to the AER on the discussion paper relating to the AER approach to electricity wholesale market monitoring. Attached to this letter is a response to the specific questions raised by the AER in its discussion paper.

The MEU observes that its Public Officer has attended a one on one meeting with AER staff and been a participant at the forum held on 6 October 2017. At both these meetings, the MEU provided some observations and considers that the commentary provided at these forums is part of its submission to the AER.

## General observations

The MEU recognises that the decision of the CoAG Energy Council to expand the AER requirements for monitoring the performance of the NEM wholesale market has arisen as a result of the rule change proposal made by the MEU in November 2010. This rule change was initiated by the clear exhibition of some generators using their market power to cause the price of electricity in the SA region spot market to reach very high levels, with these very high spot market prices leading to rises in contract offers and ultimately to retail consumers of electricity in the SA region. The MEU also considers that the rule changes proposed by the AER on ramp rates and by the SA government on rebidding were also responses to the observed exercise of generator market power.

At its most fundamental, if there is sufficient competition in the provision of each of the services provided by generators into the NEM markets, then the prices that result will reflect the most efficient outcomes for consumers. It is clear that over the nearly 20 years of NEM operation, the generators have found a number of ways to unduly influence the spot price for electricity by using various

techniques to utilise a reduction in competition to exercise market power and thereby increase electricity prices[1].

The MEU accepts that generators will exercise market power if it is available[2] and it is the role of the rule makers to ensure that the rules minimise the opportunity for generators not to be able to abuse the market. Equally, the MEU also notes that there are times when generators might have market power but elect not to use it to increase prices. While this might be the case, the MEU considers that the fact the potential for exercising market power does exist at times means that there is a need to identify that this is the case and for actions to be taken to ensure that the market power is not used in the future.

## Consumers and demand side responsiveness

While it is recognised that electricity is now considered to be an essential service due to its very pervasiveness, there is a view widely held that responsiveness from consumers of electricity has to be an essential feature of the electricity market. Despite this assumption, research by Electricity Consumers Australia, QCoSS and Business SA reported at the ECA Foresighting Forum 2017 (20/21 February 2017) found that there is a very high proportion (greater than 60%) of residential and small business consumers of electricity that don't engage with the electricity market for many reasons including tenancy, age, disinterest, technical inability, etc.

With this in mind, the MEU considers that while economists discuss efficiency measures in the electricity market as being the driver for outcomes, the MEU points out that electricity supply is not an end in itself. Electricity is needed by all sectors in society and this imposes a responsibility that the price of electricity is no higher than the cost that consumers can carry. For example, if the price for electricity is too high and this causes a user to cease operations (eg a regional manufacturer) the effect of the high electricity prices will result in unemployment and severe disadvantage to that region's economy. So seeking high economic efficiency in the electricity market might lead to a significant loss of efficiency in other sectors and impact the national productivity.

While MEU members do get involved in responding to electricity market signals, by reducing demand when signals indicate a need, they also report that to be active in demand response is not a costless exercise and that a direct outcome of their involvement is a loss of productivity of their operations. It is a major concern of the MEU and its members that there is an attitude that the efficiency of the electricity market is paramount, even if this reduces the productivity of electricity users. The MEU points out that the small gains in productivity seen in

[1] The MEU is aware that some eminent energy market economists consider that energy only markets are more susceptible to exercise of market power due to what they refer to as "black hole money".
[2] The MEU notes that a company is obligated to maximise the benefit to shareholders even if this is not in the long term interests of consumers

the electricity market as a result of demand side activity might well result in a larger loss of productivity when measured nationally.

With this in mind, the MEU considers that the AER should not include the demand side as an offset to any reduction in competition that leads to an ability of generators to exercise market power.

## Competition

The NEM operation is predicated on vigorous competition between suppliers of the different services required by the NEM and the market rules are crafted based on this assumption. Yet over the years of operations of competitive electricity markets, it has become apparent that no electricity market is perfect with regulators needing to be alert to the abilities of generators gaming the market and to be vigilant[3].

The electricity market rules were written at a time when the electricity market was developed based on large independently owned dispatchable generation units delivering power to demand centres, yet this structure has changed significantly over the past decade, typified by decreasing competition with the three dominant retailers acquiring the bulk of generation assets, either directly or through power purchase agreements. At the same time the mix of generation has also changed dramatically.

This then poses the question – are the NEM rules and market structure still fit for purpose? – or is there is a need for fundamental change as has been seen in other electricity markets[4]. While the MEU accepts that analysis of the NEM market structure might be outside the scope of the AER monitoring program, the MEU considers that it is "the elephant in the room" and needs to be recognised as such.

As noted above, the ability to exercise market power arises when competition is reduced[5]. While there is an assumption by many that the spot market is where the exercise of market power is exhibited, the MEU points out that there are many other elements within an electricity market where market power can be exercised. For example, the provision of other services (eg FCAS, inertia, etc) allows generators to face limited competition and so use their market power to provide pricing which is far above the costs of production. This means the AER, in order to fulfil its new functions of market monitoring, has to examine all elements which go to make up the cost of electricity in the wholesale market.

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[3] See for example Frank Wolak "Unilateral Market Power in Wholesale electricity markets" available (along with many other useful assessments and analyses of electricity markets) at http://web.stanford.edu/group/fwolak/cgi-bin/?q=node/3

[4] For example, the NEM gross pool energy only market was initially based on the UK market structure yet since then the UK electricity market has moved to a capacity based balancing market

[5] A recent ACCC review of petrol pricing highlights that an oligopoly of 4 dominant retailers in Brisbane was able to drive prices higher than those seen in other cities where competition is higher

Regional markets need to be examined each on their merits, as each region has its own mix of generation and limited interconnection with other regions. The MEU points out that this mix can create potential for gaming and points out:

- Wind and solar generation through their dependencies on fuel availability are effectively not able to control the market[6] and so are always price takers. So wind and solar do not really add to the levels of competition, yet they impact the needs of dispatchable generation to be more flexible.
- Within dispatchable generation there three basic groupings – base load, intermediate and peaking and each has its own cost structure and ability to serve the market. A reduction of competition in any one of these three sectors can have a major influence on the outcome of the market and the ability of players in each sector to exercise market power.
- The technology used for each of the basic three services is different and this means any analysis of competition needs to reflect the ability of plant technologies used in each needs to reflect its ability to provide competition. For example, a brown coal fired power station can take many hours from cold to be available for dispatch and has low ramp rates and limited turndown once generating commences. This means that in the period between initiating a start and when it can deliver sufficient output to impact the market, it cannot be considered to be providing competition and its ability to respond to rapid changes in demand also limits its ability to provide competition.
- In an electricity market, due to its instantaneous features, competition must be assessed within temporal constraints. In the event that 5 minute settlement is implemented in the NEM, many gas turbines will not be able to provide competition within a 5 minute settlement period and therefore competition within each 5 minute period will be limited to batteries and those generators already dispatched[7].
- While storage can assist in providing some competition, it is important to note that storage is purely an arbitrage play where there is added a premium to the cost of acquiring electricity for when that same electricity is later on sold, providing a basis to game the market. The ability of storage options to provide competition is also limited not only by numbers and size but by their technology. For example, while batteries can discharge quickly, once discharged they no longer provide competition and require significant periods to regain their charge and able to re-enter the market.

[6] The MEU accepts that they can influence the market by causing displacement of dispatchable generation but their ability to ***control*** the market is limited to withdrawing capacity when they might otherwise be able to generate. Exercising market power by limiting output would be unusual as wind and solar also operate to provide renewable energy certificates.

[7] The MEU has been advised that many hydro power stations are not able to be dispatched within a 5 minute settlement period.

- As noted above, the demand side should not be assumed to provide competition to supply side providers

The MEU considers that assessing the levels of competition in the current market structure is more complex than in the past.

## What needs to be examined

The MEU is concerned that in attempt to make the AER task manageable, the AER will focus its monitoring function on the "critical few" elements that have the greatest impact on the cost of electricity to consumers. While the MEU accepts that the focus needs to be on those aspects where the most value can be derived, it points out that "we don't know what we don't know". This means that the AER needs to assess all of the various aspects where there might be low competition (and therefore the ability to exercise market power) to establish which specific areas should get the most monitoring attention.

In making a decision not to pursue monitoring of a particular element, this does not mean that such elements should never be tested again. The MEU considers that the AER needs to test which elements need to be monitored in detail on a regular basis to verify that any decision not to monitor is still valid.

However, in making such assessments, the AER needs to look at the wider implications. For example, in order to ensure there is sufficient reliability in a market, there are operational decisions made by AEMO to limit the dispatch of some generation and increase the dispatch of other types. So an analysis of the levels of competition needs to assess the extent of the impacts these operational decisions might have on competition and whether the outcome results in lower competition and a greater ability to exercise market power. For example, the MEU is aware that AEMO does direct wind turbines to reduce output at times and to require dispatchable generation to be dispatched in order to ensure the risk for any loss of supply is minimised. These directions impose changes in the levels of market concentration.

Further, the AER needs to assess whether other issues such as rebidding are providing an ability to exercise market power.

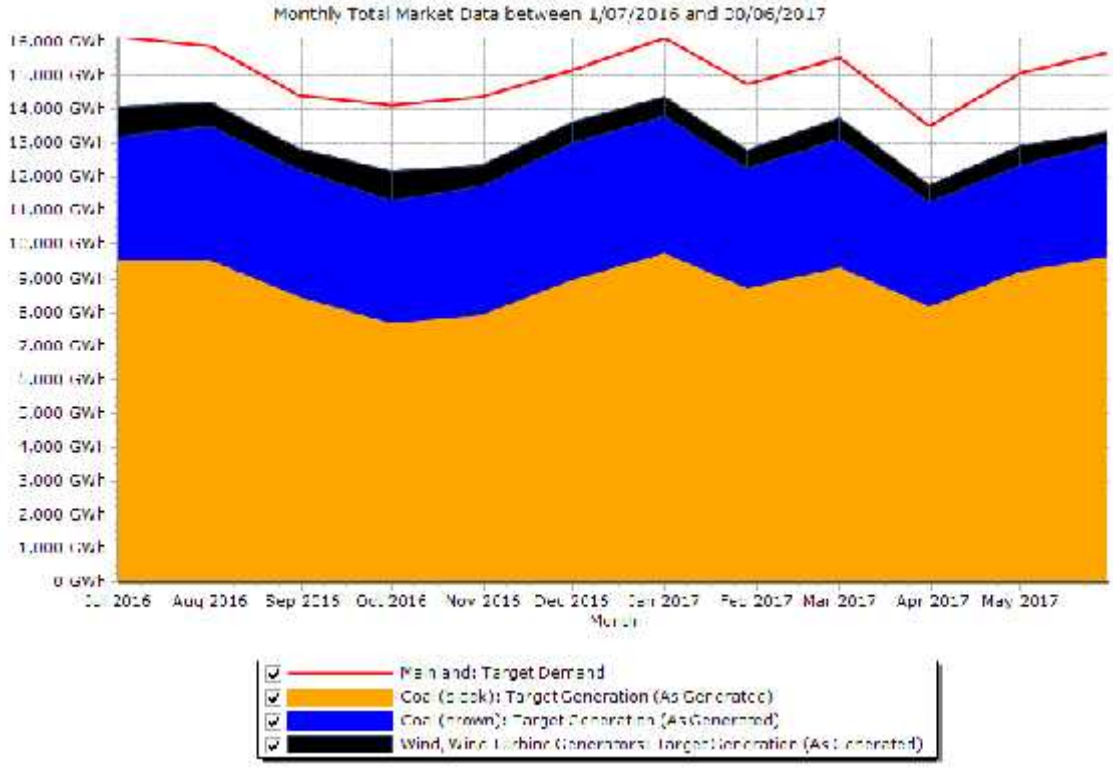
The MEU has noted a loose correlation between the spot market outcomes at a point in time and the degree to which the current spot market influences the futures and derivatives markets. While there is an expectation the futures market will reflect the expected conditions that apply in the future, this does not appear to always be the case. This means that AER needs to assess the degree of a loss of competition in the spot market impacts prices being offered for the future both as a derivative and retail contracts that are offered.

In addition, the MEU notes that only dispatchable generators can provide prices for future markets and so the competition for setting future expectations is set primarily by dispatchable generation. This expectation obviously provides a bias

in what is considered to be reasonable for future prices and retail market offerings.

The MEU is aware that the ACCC is conducting a review of the electricity retail market. As the wholesale price is fundamental to the retail price, the MEU considers that the AER should include in its examinations the extent to which the retail market is being impacted by the wholesale prices. Equally, the retail market price offerings will provide a useful guide as to whether the wholesale market is operating as expected.

The MEU also notes that although the current mainland market is served by ~90% of lower cost generation (ie coal fired and wind – see chart below), the spot price, futures price and retail contracts all generally reflect the price of electricity delivered by gas fired generation[8] - possibly because gas fired generation sets the spot price and gas fired generation is usually the marginal generator. This raises the question as to why the price for electricity in futures and retail contract offerings doesn't reflect the underlying reality that such a large proportion of generation is provided at costs well below the prices that are being offered.




**Source: NEM data via NEM Review by global-roam**

[8] Noting that the cost of gas has driven the cost of gas fired generation to very high levels in recent times

IN this regard, the MEU notes that both AGL and Origin Energy have increased their profitability in the electricity sector of their operations[9], probably because they are selling their coal fired and wind generation outputs at gas fired electricity prices, rather than providing the benefit of this lower cost generation in their retail price offerings. This aspect of transfer pricing in relation to second tier retailers is discussed below.

## The tools available to the AER

The MEU accepts there is no one single determinative tool available to test the market to ensure that the market outcomes reflect what should occur if there is vigorous competition.

There are terms used such as "a workably competitive market" but while economists debate what this is, there is no clear definition as to what constitutes "workably competitive" or how to measure if this is occurring. The AEMC used such terminology in its assessment of the MEU rule change proposal and ultimately decided that as long as outturn average annual prices in the market did not exceed the costs a new entrant generator might incur if it entered the market, then the market was considered to be workably competitive. However, by using different approaches for analysis, the AEMC identified that different outcomes were delivered by different means of measurement of new entrant generator costs, implying that "workably competitive" might not be as clear cut as assumed.

The MEU has observed that second tier retailers have to purchase their electricity hedges from their competitors which control the bulk of generation that is available. For example in NSW the bulk of base load generation is in the hands of the "Big 3" retailers. This raises the question as to how each of these base load "gentailers" provide hedges to their second tier retail competitors – whether the transfer pricing is based on the costs of production of electricity or the prices are based on (say) gas fired OCGT generation plant. It is clear that second tier retailers get the gas based costs of generation allowing the Big 3 to take their profits at the production end of the supply chain. This outcome means that consumers do not get the benefit of competitive retail offerings.

The MEU also notes there are many generators that due to their size (small compared to others) or technology (eg wind and solar) are price takers and will not be able to exercise market power. The MEU identified in its rule change proposal that only some generators will ever be able to exercise market power due to their size relative to the markets they serve. With this in mind, the MEU considers that the AER should identify those generators and retailers which are unlikely to be able to exercise market power and focus its monitoring on the few generators and retailers that are more likely to have market power at times.

[9] This information is derived from their company financial reports. Similar data from Engie and Energy Australia in not publicly available

With these observations in mind, the MEU considers that the AER should employ a suite of measures to assess the levels of competition and should assess the tools used in capacity markets for their applicability[10] to an energy only market. The MEU is particularly drawn to some of these tools as they are also used to assess whether the providers of the generation capacity have met their obligations to provide capacity and able to be reimbursed for the capacity provided to each subsector of the generation elements.

The MEU provides the following observations to assist the AER in looking for the tools that the AER might use for monitoring:

- At the most fundamental, price is the tool that indicates whether there might be exercise of market power. If the price for the product is above the cost of providing the service, then it is possible that market power is being exercised. The NEM design is based on merit order of dispatch where it is assumed each generator will bid its SRMC[11], so if generators are bidding in excess of their SRMC and they are being dispatched, this implies that there is insufficient competition and market power is being exercised.
- If generators are being dispatched out of merit order (ie lowest cost producers are being dispatched after higher cost producers for some of the output) then this is also an indicator that potentially the lower cost producers are withholding capacity that might otherwise keep market prices lower[12].
- The cost assessed for the supply of electricity is another aspect where there are differing views. The MEU is aware of the shortcomings of assessing long run marginal costs and levelised costs for new entrants, but the MEU considers that direct cost estimates (eg as carried out for AEMO) and even costs derived from generator reporting are also useful guides, especially when assessing merit order for dispatch
- There are a range of other tools that have been developed by regulators in competitive electricity markets to assess whether there is sufficient competition to identify if the market is so concentrated that the potential for exercise of market power is high. Such tools include:
    - Herfindahl assessments of concentration
    - Herfindahl assessments at different levels of demand (as a generator is dispatched that amount of generation dispatched can no longer provide competition
    - Analysis temporal bidding practices

[10] For example, the NYISO assesses the usual operating envelope of each generator to see if it is using market power to increase its prices at certain times
[11] The assumption for using SRMC is that a generator in vigorous competition will not offer its output below its cost of production and in order to be dispatched will bid at this cost point
[12] This was the observation that the MEU identified that triggered its rule change proposal

- Residual supply indexes[13]

- As noted above, the AEMC proposed a tool for assessing the presence of prices above a "workably competitive market". It considers that if the market prices are below that of new entrant costs, then the market is working and any impacts of the exercise of market power are transient and can be discounted. The MEU does not agree. A generator with market power within a region is able to hold prices are just below new entrant prices, so as not trigger the AEMC assessed price point, yet the harm to consumers will be significant. Although the AEMC used this tool determinatively when examining the MEU proposed rule change, the MEU considers that due to its shortcomings[14], it should be considered to be just a tool which provides another piece of information amongst others.

- The MEU has noted with great concern that the bulk of new generation is effectively owned by the dominant retailers[15] either directly or by through long term power and REC purchase agreements with new developers. So not only there needs to be assessment of the levels of concentration of generation plant owned by the dominant retailers but also of the amounts of generation that they beneficially own through long term contracts and what new generation will be controlled by the dominant retailers.

- The MEU is also aware of other regulators seeking to address market power issues. For example, in 2008, Ofgem identified that the 6 large suppliers had higher profit margins than in more competitive areas of the market. Ofgem proposed to require the "Big 6" to publish separate regulatory accounts for their supply and generation businesses[16]. The MEU considers that access to detailed accounts from each generator would provide a very useful indication as to which generators are able to use market power to increase their profitability and what their costs for generation actually are.

- Assessment of the bidding practices when generators are over or under contracted with forward hedges[17]

- The MEU is sure that there are many other reports and tools developed for overseas markets that the AER would find useful.

However, the MEU is very much aware that while all of the tools developed will assist in assessing whether the market is sufficiently competitive to limit the

[13] See David Newbury "Predicting Market Power in Wholesale Electricity Markets", EUI working papers RSCAS 2009/03 Robert Schuman Centre for Advanced Studies
[14] The AEMC final determination highlighted that depending on the approach used to assess the long run marginal cost of a new entrant, significantly different conclusions can be drawn
[15] Who are also the main owners of existing generators
[16] Ofgem - Energy Supply Probe – Initial findings report, 6 October 2008
[17] See Frank Wolak "An empirical analysis of the impact of hedge contracts on bidding behaviour in a competitive electricity market" Working paper 8212 available at http://www.nber.org/papers/w8212

exercise of market power, there is no one tool that will provide clear cut evidence. With this in mind, the MEU considers that the AER should use a variety of tools and build up a picture of the NEM landscape.

## Price signals

The MEU accepts that price signals are a key element of a competitive electricity market as these signals provide a clear appreciation of future need. This implies that there will be cycles of higher prices followed by lower prices as the impacts of the increased competition delivered by the new generation are felt.

Equally, high prices that are used as a signal for new investment also cause considerable harm to consumers while they wait to be addressed. This means that the time frames[18] for the entry of new generation are critical in the assessments.

In addition to the very high prices that generators can impose on the market through the exercise of market power, the MEU has also noted that some generators have exercised market power by the long term maintenance of lower prices than those that would have attracted attention (eg by the AER through its $5000/MWh price reporting). The MEU considers that this approach to market power also needs to be included in assessments as the maintenance of prices at any level (eg a floor price) or just below the new entrant price would deliver significant profits to a generator but avoid the introduction of additional competition.

Where the issue of exercise of market power impacts the price signals is where it is apparent to all that the high price has been manufactured by the exercise of market power. If potential new entrants see that the price signal is manufactured rather than a result of scarcity, they will be loath to invest as the generators with market power can make such an investment extremely risky. Empirical evidence from the NEM is that when the high price is primarily driven by the exercise of market power, new investment in generation does not occur – an understandable outcome!

## Barriers to entry

When assessing whether to enter the electricity market, new entrants examine many aspects including:

- What signals the market is providing. Such signals might be price signals but also narratives by informed market players including AEMO
- Whether these market signals are legitimate or manufactured

[18] Such time frames include the time to assess commercial viability, obtain permits, procurement, construction and commissioning

- How concentrated the market is and the power of the existing players likely to harm the new entrant should it enter the market
- The amounts of time that the new generator might be operational and whether the new generator will displace other generators in the merit order of dispatch.
- Size limitations. For example, while the market might imply that there is a need for an additional 50 MW of (say) base load generation, to be commercially efficient, a much larger plant would be need to be built to allow it to compete. Increasing the size increases the investment, making a commercial decision much more risky and therefore providing a barrier to entry[19]
- How long it will take to enter the market with the new generation plant
- What fuels might be available for use and at what price[20]
- What incentives are provided by governments (State and Federal) for a particular form of generation
- What the future holds with regard to government (State and Federal) policy and the potential of future policy changes
- The extent of government (State and Federal) involvement in the markets and what other actions governments might take[21]

So while there might be a signal that a new entrant would be able to make a profitable entry, there are many other issues other than a market signal that will determine whether such an entry will be implemented. So there are many more barriers to entry than just being able to deliver a product at less than the price provided by a market signal.

## Concluding comments

The MEU is pleased to note that the AER will be making continuous assessments of the NEM and will be reporting to the CoAG Energy Council on a more frequent basis than just providing formal reports every two years. The MEU is also pleased to note that in its reporting to the CoAG Energy Council, the AER will also be providing potential solutions to any concerns that they see arising.

During the forum on 6 October, there was raised a view that the AER might establish and advisory group to provide the AER with first hand information and observations about issues of concern about the monitoring process. It was

[19] The MEU has noted that by far the most common new dispatchable generator added to the NEM since its inception has been the low cost open cycle GT which also has the highest priced output
[20] At the moment, gas price and availability are a significant barrier to entry
[21] For example, the decisions of the SA government to fund a new dispatchable generation plant and a grid sized battery

suggested that this group could perhaps operate in a similar way to the Reliability Panel used by the AEMC where there are a mix of representatives from each part of the supply chain along with consumer representatives. The MEU is very much drawn to such an advisory group and encourages the AER to examine this concept in some detail.

We appreciate the opportunity to have provided this input to this AER monitoring project. Should you wish for amplification of any of the comments provided in this response, please contact our Public Officer (David Headberry) on 03 5962 3225 or at davidheadberry@bigpond.com .

Yours faithfully

David Headberry
Public Officer

## Responses to AER questions

The MEU provides the following responses to the specific questions raised in the Consultation Paper. The MEU has endeavoured to keep its answers as concise as possible and refers to the commentary in the preceding sections to amplify its reasoning.

| | Question | MEU observations |
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| **1** | **What material should we consider in establishing our approach?** | See comments above |
| **2** | **What factors should we consider when prioritising tools or analysis?** | See comments above |
| **3** | **What are the relevant products in the wholesale electricity markets? Are frequency control ancillary services (FCAS) and energy products part of the same or different markets?** | See comments above.<br>The MEU considers that there are many elements that make up the final cost to consumers and all need to be assessed as some impact other cost elements in the market. Once each is assessed for impacts, the AER could then focus on the critical few that have the most impact on consumers |
| **4** | **Given the interactions between spot and derivatives markets, to what extent should we incorporate monitoring and reporting of outcomes in derivatives markets?** | Of concern to the MEU, is that the derivative products provide an expectation as to what might be acceptable in forward contracts. If the derivative prices are effectively a result from the exercise of market power, this provides a signal for retail contracts, enabling the retailers (especially those with significant generation assets) to implement higher retail contract prices than are justified based on the costs of production.<br>This means the AER needs to investigate all such interactions to identify where the outcomes might reflect market power issues |

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| **5** | **To what extent should we incorporate monitoring and reporting of interregional settlement residue rights (IRSRs)?** | These should be investigated to identify if they have a significant impact on other products and outcomes for consumers. If the investigation leads to a conclusion that they have little impact, there would be no need to ongoing monitoring. |
| **6** | **What are the factors we should consider when defining the geographic dimensions of the market?** | See comments above<br>The MEU is aware that the ACCC has already reached a conclusion that each region needs to be considered separately with regard to assess market concentration issues.<br>The MEU also considers that each region needs to be examined but also points out there are reasons to examine sub regions as well. For example, while Queensland is treated as a single region (for political reasons) but due to constraints in the transmission system Queensland should in reality be treated as two or three regions. With this in mind, the MEU considers there is value in examining whether geographic considerations might be extended to sub regions as well to assess whether market concentrations sufficiently impact sub regions and so artificially raise prices that consumers see. |
| **7** | **What are the factors we should consider when determining the relevant period of time for our assessment?** | See comments above<br>While the AEMC in its examination of the MEU rule change concluded that periods of one year should be the basis for assessments, the MEU points out that regulators in other jurisdictions examine their markets on a shorter period. For example, the NYISO assesses variances from the usual operation of each generator on a 3 month basis, and this same 3 month period was used by Public Utility Commission of Texas when assessing market power issues in Texas[22]. |

[22] See ERCOT notice of violation of TXU assessed on March 28, 2007, Report on Violations and Recommendation for Administrative Penalties and Refunds Against TXU Corp., et. al. for Violations of PURA Sec. 39.157(a) and PUC SUBST. R. 25.503(g)(7)

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| **8** | **What issues should we be aware of in applying the definition of effective competition in the National Electricity Law? Are there additional matters we should consider?** | See comments above<br>At the most basic level, if prices paid by consumers exceed the average costs for delivering the products to market, this indicates that there is not sufficient competition to generate efficient prices and that there might be aspects of market power being used to garner excessive profits by providers.<br>The MEU considers that there has to be sufficient competition in the provision of each of the various supply elements that make up the final price to consumers. |
| **9** | **What factors can compromise efficiency in wholesale electricity markets?** | The MEU points out that electricity is now considered to be an essential service. This means that the value placed on electricity is not readily determined by what price might be acceptable to consumers but what price electricity can be delivered at.<br>For example, an elderly or sick person might need cooling to maintain their health but they might not have sufficient funds to be able to purchase electricity at a price offered by another consumer. Similarly, if a manufacturer ceases production because electricity prices are too high, this will cause loss of employment and redirection of investment[23] that would otherwise deliver improved productivity on a national basis. Further, as noted above, demand side responses can impact the productivity of downstream users<br>Efficiency in the electricity market is taken to imply that the price should be the value that the highest bidder might pay. So assessing the efficiency of the electricity market in isolation does not take into the consideration of the well being of the nation more widely.<br>So the MEU considers that the AER assessments of productivity in the electricity market to the exclusion of the impacts in other markets and on a national basis, provides a false measure of efficiency. This means that the AER must look at efficiency measures which are wider than just the electricity market |

[23] For example, to overseas markets rather than in local downstream activities

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| **10** | **What market concentration indicators should we consider?** | The MEU points out that all such measures have weaknesses when applied to electricity markets and this has been widely reported on by many eminent economists addressing electricity markets. Therefore the MEU considers that all need to be considered, including others used in other jurisdictions<br>. |
| **11** | **What are the relevant sources of potential barriers to entry? What methods should we use to assess these barriers?** | See comments above<br>The MEU considers that assessment of barriers to entry need to look at each of the elements that comprise the total delivered price to consumers[24]. So the AER needs to look at the barriers for base load, intermediate load, peaking, FCAS, inertia, interconnectors (these impact settlement residues and the ability to trade across regional boundaries), etc. |
| **12** | **What are the issues we should consider regarding horizontal or vertical integration in the wholesale energy markets?** | The MEU notes the points made by the AER in the discussion paper and agrees that vertical and horizontal integration is indeed a major issue for the NEM. The MEU has noted with interest that the dominant retailers not only are dominant generators but they also have, through PPAs with non-owned generation facilities, control of much wider generation resources than might otherwise be imagined. The MEU considers that the dominant retailers have the consumer base to be able to contract new generation with less risk than retailers with a much smaller consumer base<br>This means that the extent of both vertical and horizontal integration must be examined as a precursor to the monitoring function, to identify the extent of this integration and its impact on the NEM. An assessment then needs to be made to identify the extent that this integration has and continues to reduce competition in the wholesale market. |

[24] Noting that the delivered price must be within reach of all consumers – not just the consumers which can afford high prices

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| **13** | **What aspects of a participant's conduct should we consider? Are there any methods or tools that might be insightful for assessing conduct?** | See comments above<br>The MEU notes that the NEM is predicated on merit order dispatch of generation based on SRMC. When governments owned the electricity assets and controlled the state based supplies, they would operate their assets to deliver the overall lowest cost of electricity to consumers. Unfortunately, the NEM rules allow generators to control if, when, how much and at what price they will provide supply. The MEU considers that deviations from merit order dispatch are a starting point for assessing whether participants are behaving well or not. The MEU has observed that in other jurisdictions regulators have analysed in depth how each individual generator operates when there is strong competition, thus providing an envelope for "normal" operations. Assessing deviations from this normal operating envelope will provide a guide as to the extent of inefficient dispatch and/or potential withholding. |
| **14** | **How should we assess the overall performance of the wholesale markets?** | The MEU agrees with the AER that it should assume that effective competition does not necessarily deliver efficient operation and therefore both aspects should be assessed.<br>Similarly, the MEU is concerned that the market rules themselves will impact on the levels of competition and market efficiency, and/or if the rules are detracting from effective competition or efficiency of the market.<br>For example, the MEU is very concerned that the proposed move to 5 minute settlement will have a major impact on the levels of competition for each service provided when assessed on a temporal basis. |
| **15** | **How should we have regard to whether prices are determined on a long term basis by underlying costs rather than the existence of** | The MEU agrees with the AER that the various measures for assessing underlying costs are not determinative in themselves. The MEU considers that all of the different measures should be used as a suite so that a range of outcomes are developed. From this range, the AER can make its assessment on an overall |

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| | **market power?** | basis.<br>The MEU points out that the AER does not have to operate in isolation and should gain input from the many other regulators and market monitors in other jurisdictions. |
| **16** | **How can we identify inefficiencies in the wholesale markets?** | While the MEU agrees with the AER on their comments on identifying inefficiencies, the MEU considers that analysis of each "normal" operational envelope of a generator when facing competition provides a guide as to what the costs of operation are for each. It is inefficient if the generator then operates outside this envelope when competition is reduced. |
| **17** | **How should we measure the extent of any inefficiencies we identify?** | See comments above<br>The MEU sees that the existing AER reporting (eg for prices above $5000/MWh) will be a useful adjunct to its new monitoring requirements. The frequency each generator is mentioned in these reports over time should be monitored.<br>Further, the frequency which each generator strays from its "normal" operating envelope and causes high prices will provide an indication of when each generator exercises market power.<br>Equally, the MEU is aware that some generators use market power to hold prices high, but not at a level that would normally trigger significant concern. Analysis is required of the bidding practices of each generator to identify if a generator has the power to maintain prices above their costs in the market for sustained periods of time (eg to enforce a floor price which is above the costs of production/SRMC). |