1 June 2011

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South
NSW 1235

Dear Mr Pierce

ERC0123 National Electricity Amendment Rule 2011

The National Electricity Market (NEM) is a well functioning market that is delivering on its objectives. Annual prices are low, and power is reliably delivered. The Major Energy Users' (MEU) rule change proposal is a fundamental redesign of the NEM that could compromise its quality and efficiency as a market. It is not an appropriate response to the isolated MEU concerns.

The NEM secondary market is an integral part of the NEM. It has evolved into a deep and liquid hedging market where many buyers and sellers of energy can use a variety of derivative products to manage their risk exposures. This includes the ability of large energy users to limit their exposure to pool price volatility, including the transient high pool prices that are a design feature of the NEM. The MEU proposal threatens to adversely impact the liquidity and depth of this market. This, in turn, could impact the market's operation and the ability of the NEM to achieve its objectives. Our attached submission outlines these concerns in fuller detail.

Thank you for considering our comments on the proposed rule change. Should you require further clarification please contact me on (02) 9776 7993 or at djeffree@afma.com.au.

Yours sincerely

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Submission on the ERC0123

National Electricity Amendment Rule

June 2011

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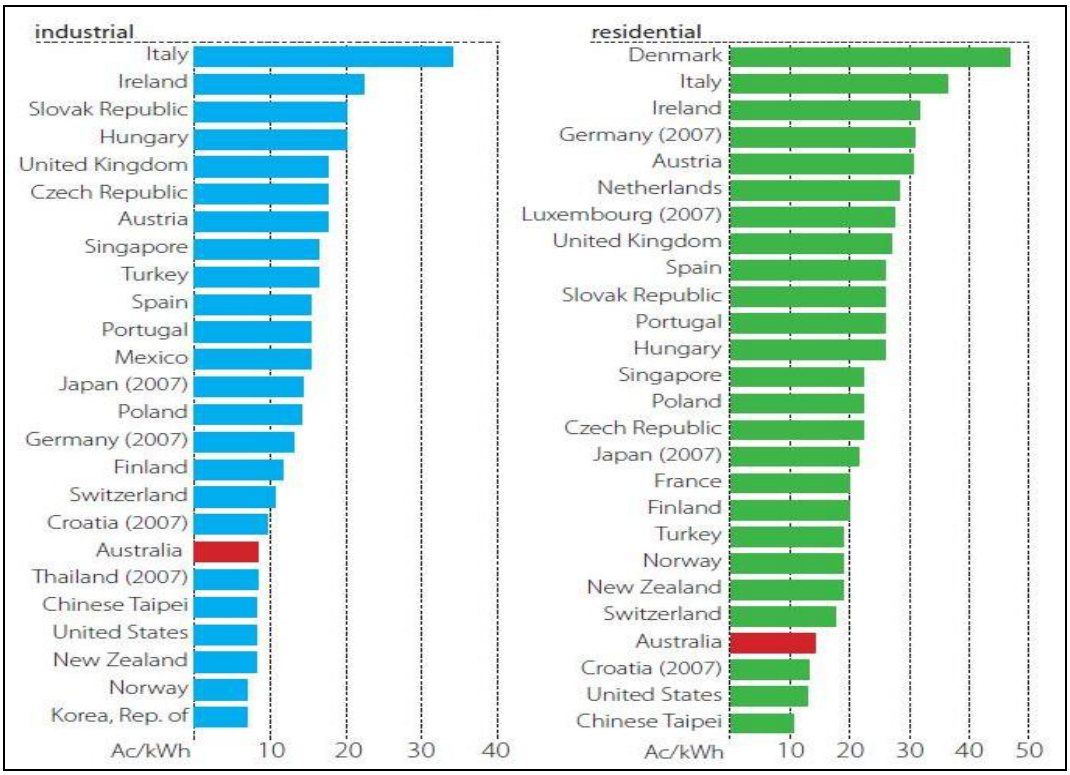
1. Introduction

The Australian Financial Markets Association (AFMA) welcomes the opportunity to provide comment on ERC0123 National Electricity Amendment (Potential Generator Market Power in the NEM) Rule 2011. AFMA represents the interests of participants in Australia's wholesale banking, financial and electricity markets.

Our members include Australia's major energy companies, electricity market participants, and financiers. This submission has been prepared by AFMA's Electricity Committee which is elected by member firms. The focus of this Committee is on OTC and exchange-traded financial markets.

Australia is well served by an open, competitive national energy market that, according to the Australian Bureau of Agricultural and Resource Economics, delivers some of the lowest cost energy in the OECD[1] (see **Figure 1**).

Figure 1: ABARE comparison estimates of world electricity prices, 2008, selected countries.



Reliability in the NEM has, since the market started in December 1998, been within the reliability standard in all regions. This reliability standard is currently set at greater than 99.998% reliability.

[1] http://www.abare.gov.au/publications_html/energy/energy_10/energyAUS2010.pdf p.26.

This low-cost, high reliability energy service that supplies Australian households and drives Australian business is a direct result of the carefully designed and regulated market that underpins it. In these circumstances there is no case for fundamental market redesign as proposed by the MEU rule change.

According to the International Energy Agency, "Australia now has one of the most transparent and competitive electricity markets in the world and could serve as a model for other countries"[2].

While no market is perfect, the Australian energy market is a national asset that should be built upon and not undermined. It is performing very well in meeting its ultimate objectives in the long-term interests of customers.

2. Scale of the Proposal

The changes proposed by MEU amount to a fundamental market redesign and the consequences, while difficult to fully foresee, are likely to be far reaching.

Currently, the NEM operates as a free and open market where generators may bid in as much capacity as they determine appropriate at any price between the price floor and maximum price cap. It is a highly competitive market and prices are generally low the great majority of the time.

Figure 2 shows the maximum daily price versus maximum demand across three NEM regions from 1 January 2009 through 20 May 2011. It shows that spot prices are generally very low. Each chart covers a period of 870 days and the great majority of these days - each represented by a dot on the chart - show maximum prices well below the $300/MWh level (marked with a green line).

The few days with high maximum prices are associated with periods of high demand with only a very small number of exceptions in the 870 day sample. Conversely, periods of low demand are unlikely to be associated prices in excess of $300/MWh.

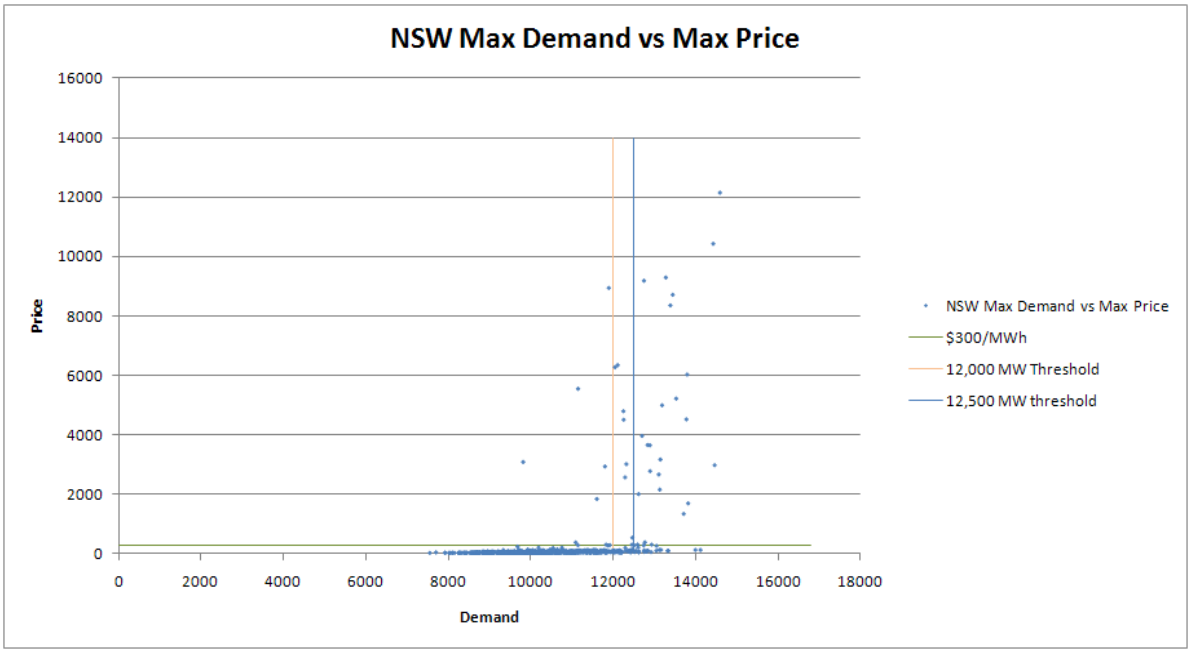
Generators participating in this market typically invest large amounts of capital to build or buy electricity generating capacity. These private investors should have confidence that, subject to the various scheduling requirements, they will be free to operate to their own business plans in the deployment of this capacity.

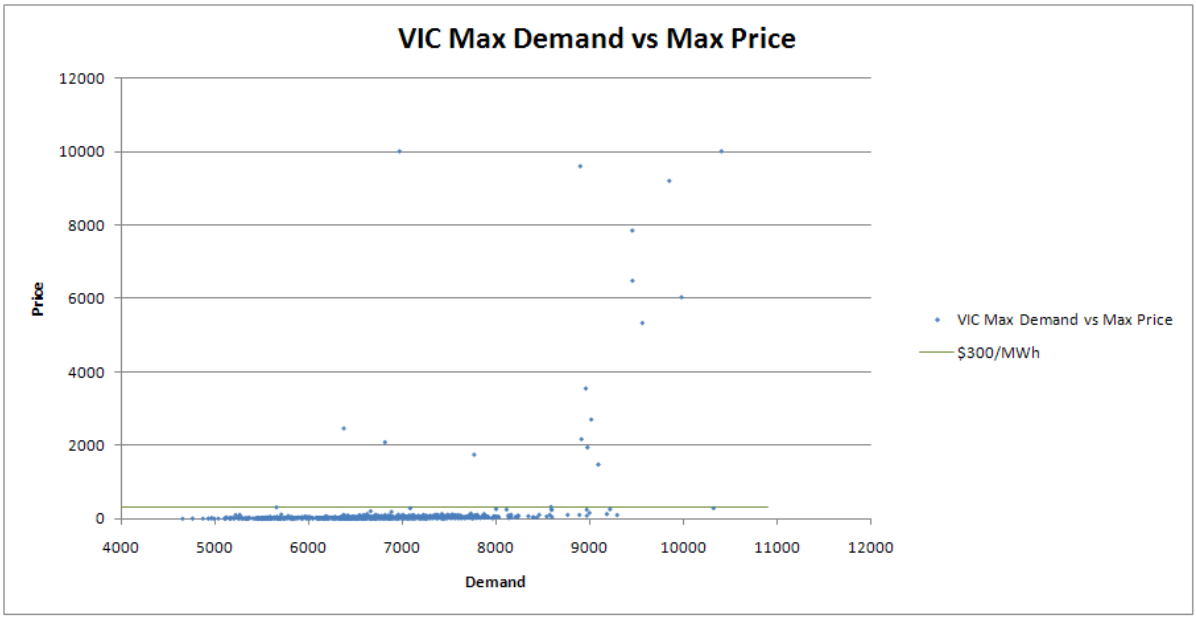
The proposal to require 'dominant' generators to bid all their capacity during periods of high demand at a very low price (compared to the maximum price cap) of $300/MWh

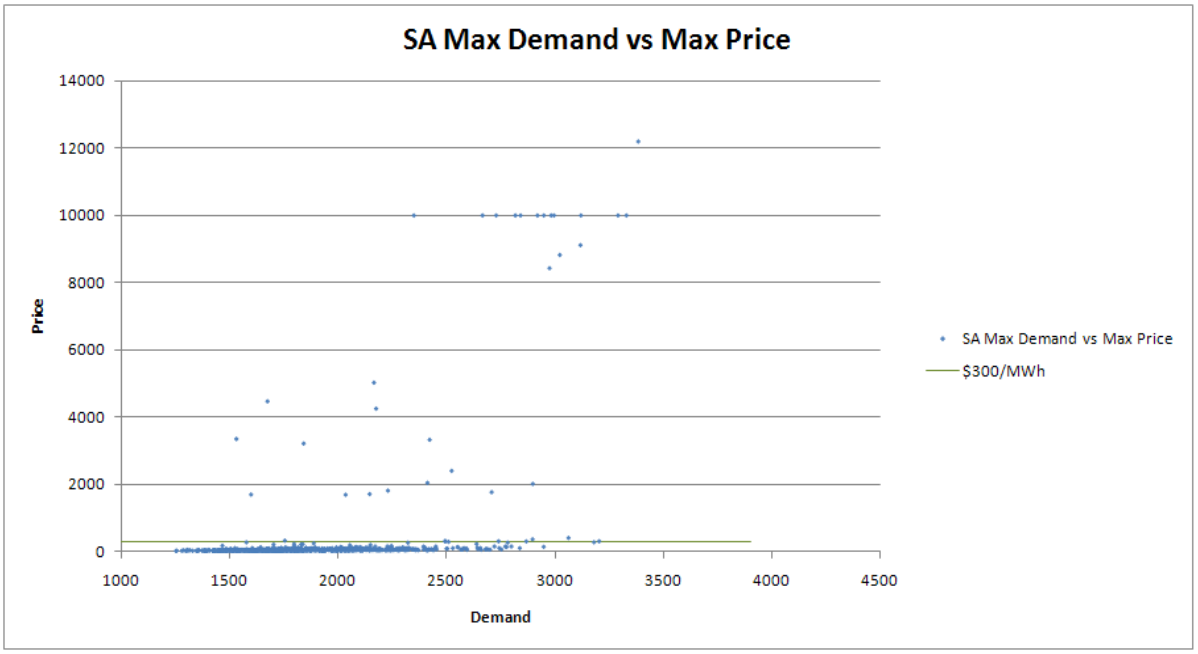
[2] http://www.ret.gov.au/energy/Documents/erig/ERIG_exec_summary20070413112814.pdf IEA referenced p. 3.

means that the market would no longer be a free market, in terms of either participation, or in terms of bid price.

Figure 2: Max Daily Price vs Max Daily Demand NSW, Victoria and South Australian NEM regions 1/1/2009 - 20/5/2011 (one dot represents one day, 870 dots per chart)







3. Price

While the proposal appears to have a restriction of the $300/MWh cap to times of high demand, in reality, as shown in **Figure 2**, prices are very unlikely to exceed $300/MWh except in times of high demand. Bids above this level in times of low to moderate demand are very unlikely to be dispatched.

Applying the MEU NSW example quoted by AEMC[3] to the **Figure 2** sample for NSW, there are 6 periods exceeding $300/MWh out of the 870 days sampled before the $300/MWh MEU cap would apply for Macquarie Generation, and a further 7 periods between 12,000 MW and 12,500 MW before Delta would also have been capped. In other words, the $300/MWh limit on the bidding of two major generators (a majority of NSW capacity[4]) would have applied to both generators, or affected all but 6 days of high spot prices in NSW since 1 January 2009.

It can be seen that the MEU proposal approximates an absolute bid cap for large generators of $300/MWh at all times.

At present, the legislated cap for bids is set at $12,500/MWh meaning that the MEU proposal would reduce the maximum bid cap by 97.6% for large generators which, in light of the examples supplied in the MEU submission, could be a majority of supply capacity in the market.

[3] http://www.aemc.gov.au/Media/docs/Consultation%20Paper-babd1ce6-2e1f-4504-a005-07c6cec1ad82-0.pdf p.10.

[4] http://www.dtiris.nsw.gov.au/energy/electricity/generation#Major-existing-NSW-power-stations accessed 31 May 2011.

By effectively changing this price cap to $300/MWh for the large generators in the market, a price at 2.4% of the current maximum cap, the market design is radically altered.

The market's reaction to demand will be distorted by the MEU's proposed restrictions on bidding, and the market's price signalling may be compromised as a result. This would compromise the NEM's quality as a market.

4. Volume

As noted, generators are currently free to operate their generation capacity within the availability constraints of the NEM. The MEU proposal would restrict the market participation of significant generators defined as 'dominant' generators during the key periods where the economic viability of many generators is determined, by requiring their full capacity participation.

Requiring private sector investors to operate all their privately financed generating capacity for regulator-determined low prices is not aligned with the market-based approach to electricity supply that governments at all levels in Australia have long supported and that has delivered Australia's successful electricity market outcomes.

The business planning involved in determining the optimal bidding strategy for generation assets that represent up to billions of dollars of investment is a non-trivial exercise. It typically involves a consideration of many factors including fuel price and contracts, fuel availability - particularly for gas, ramp-up times, expectations of demand, equipment wear, transmission line flows and capacity, prices in other regions, capital utilisation, existing and prospective derivative contracts, and many other factors. All of these considerations would be over-ridden by the MEU proposal.

To require significant operators to operate at full capacity when demand is high is to dismantle a key framework design element of the NEM - that generators are able to run their own businesses in the open market.

Further, generators that would be likely deemed 'dominant' typically operate a portfolio of generation assets designed to cater for different market conditions of supply and demand, and of spot price. These assets, which may include peaking and baseload generators, can have very different marginal costs of operation.

The NEM market design allows generators to bid into the market in bands to reflect the differing underlying costs of operation of the various components of their generation portfolio. The MEU proposal, however, intends to make an assessment of whether a

generator is 'dominant' based on "all generating units owned by an entity and any other generation over which the entity has dispatch control"[5].

The MEU proposal means during periods where the generator entity is considered 'dominant' it would be required to dispatch *all* of its available capacity, at prices not exceeding the APC. The APC is currently set at $300/MWh and AEMC has indicated that it may be up to three years between APC reviews.

Open Cycle Gas Turbines and oil-run plants may not be economic even at the current APC level, and these plants could become increasingly uneconomic between APC reviews.

AEMC in setting the APC at $300/MWh noted that "the total generation capacity, with estimated SRMCs above the APC level, is assessed by the Commission to be minor compared to the total generation capacity in the NEM"[6] indicating that AEMC acknowledges that the APC is below some generators' Short Run Marginal Costs (SRMCs).

The MEU proposal would require 'dominant' generator owned equipment with SRMCs above the APC to operate this equipment at a loss whenever the deemed 'dominant' level of demand was exceeded in that region of the NEM (for that generator). One of the main aims of the NEM is undermined by this requirement, which is the 'efficient operation and use of, electricity services' (section 7 of the NEL). Efficient operation of an entity's generation assets requires that their unprofitable use not be unnecessarily mandated.

This effect of the MEU proposal would also undermine the merit-order dispatch logic of the NEM market design where lowest marginal cost assets are expected to be dispatched first.

By grouping the assets by owning entity the proposal could readily result in an inefficient generation mix. For example, a 'dominant' generator could be required to operate its Open-Cycle Gas Turbines, and conceivably even its black-start diesel generators before other generators would be required to operate much lower marginal cost Combined-Cycle plant.

This inter-generator effect is also contrary to the efficiency requirement of the National Electricity Objective, as an efficient market should dispatch generation on a least-cost production first basis.

[5] http://www.aemc.gov.au/Media/docs/Consultation%20Paper-babd1ce6-2e1f-4504-a005-07c6cec1ad82-0.pdf p. 9.

[6] http://www.aemc.gov.au/Media/docs/Final%20Determination-a3507611-7df0-49d6-ba84-afbf1062393f-0.pdf p.7.

In terms of price and volume participation, in summary, this means that perhaps a majority of supply capacity, for approximately all the time the market is open, will have their maximum bid price reduced to 2.4% of the current maximum price, the operation of their privately owned capacity will often be mandatory, the market will require generators to unnecessarily run unprofitable plant and merit order dispatch will be compromised. These are very substantial changes to the current successful market design of the NEM that AFMA contends will compromise the NEM's operation as an efficient market.

5. Volatility by Design

As the Commission is aware, the NEM is unlike many markets in that a significant amount of volatility is a design feature. Therefore, volatility in pricing is not itself indicative of any problem in NEM functioning or design. As the Australian Bureau of Agricultural and Resource Economics notes "prices should be volatile because they reflect the underlying volatility in the cost of supplying electricity".[7]

Occasional high spot prices do not automatically result in high electricity prices for businesses and consumers. In fact, the experience of the NEM is that while the Market Price Cap has been regularly reached due to a variety of factors, average annual prices are consistently low (see **Figure 3**).

A number of elements of the National Electricity Rules deal specifically with the planned volatility to limit its impact on overall average prices, the Market Price Cap and the Administered Price Cap.

The Market Price Cap limits spot price impacts while delivering appropriate market price signals. The Administered Price Cap is a further safeguard to ensure that these price signals are not excessive for a given period on the market (set by the Cumulative Price Threshold).

The $12,500/MWh Maximum Price Cap is the key adjustable design parameter that is overseen by the Government to ensure that the correct balance between energy price, and market viability and investment is achieved. The balance set by the Cap would be undermined by the MEU proposal and this could have consequences for the existing operators and potential new entrants. This Price Cap has been twice increased after review by AEMC's Reliability Panel from $5000 to $10,000 and subsequently to $12,500, which would suggest support for effectively lowering the threshold would be unlikely.

[7] http://adl.brs.gov.au/data/warehouse/pe_abarebrs99000756/PC12272.pdf p. 3.

Figure 3: Average annual prices (per financial year) AEMO[8]

Year	NSW	QLD	SA	SNOWY	TAX	VIC
1998-1999	33.13	51.65	156.02	32.34		36.33
1999-2000	28.27	44.11	59.27	27.96		26.35
2000-2001	37.69	41.33	56.39	37.06		44.57
2001-2002	34.76	35.34	31.61	31.59		30.97
2002-2003	32.91	37.79	30.11	29.83		27.56
2003-2004	32.37	28.18	34.86	30.80		25.38
2004-2005	39.33	28.96	36.07	34.05	190.38	27.62
2005-2006	37.24	28.12	37.76	31.09	56.76	32.47
2006-2007	58.72	52.14	51.61	55.19	49.56	54.80
2007-2008	41.66	52.34	73.50	45.49	54.68	46.79
2008-2009	38.85	34.00	50.98		58.48	41.82
2009-2010	44.19	33.30	55.31		29.37	36.28
2010-2011	37.70	31.54	32.44		29.15	26.68

6. The Secondary Market

The secondary market is also essential to the stable functioning of the electricity sector and its ability to grow its capacity. The MEU proposal would have a very negative effect on liquidity in the secondary market in derivative products.

The MEU proposal, by effectively limiting a majority of the market's bidding to below the $300 level of the standard cap strike price, could reduce incentives for the purchase of risk hedging at and above this level.

Generators use the secondary market to secure their financing by selling swaps and caps, and other derivative products. As generators receive the spot price on the underlying NEM market they can offset their upside on this market with payouts to customers on derivative contracts to ensure a steady income stream. On the other side of this transaction, customers, such as large energy users are able to receive contract payments when pool prices are high to offset the higher cost of purchasing energy from the pool, should they choose to do so (this optionality is discussed further later in this submission).

[8] http://www.aemo.com.au/data/avg_price/averageprice_main.shtml

Retailers and other large energy users can buy a range of these derivative products on the secondary market to cover their expected volume requirements at price levels that limit their risks due to high spot prices. This is the appropriate response for energy users who are concerned about volatile periods on the underlying electricity spot market.

It is not uncommon for generator financing to be contingent on secondary market arrangements. For example, a bank may require that a generator continually hedge a large proportion of an asset's output on the secondary market as a condition on its loan to finance the purchase or construction of that asset.

On balance, if the liquidity or pricing of the secondary market is damaged due to the MEU proposal then this could impact the ability of generators to finance new capacity. The viability of existing capacity could also be impacted by secondary market disruption. A significant reduction in liquidity could impact the viability of the peaking type of generators that the market needs more of at times of high demand.

It is worth noting that in the secondary market, many derivatives contracts have been entered into for forward periods with an inherent expectation of stability in the market design of the NEM. These contracts, in general, cannot be unwound and the proposed change would cost many parties to these contracts significantly.

7. Certainty

The most critical element for business and investor confidence is certainty. Certainty in the electricity market is essential if private sector investment of billions of dollars is to be invested in new and upgraded generation plant.

The Investment Reference Group (IRG) recently reported to the Minister for Resources and Energy that up to $240 billion would need to be spent on Australia's power generation network by 2030 if carbon mitigation and infrastructure upgrades are to be achieved. In the short term it is estimated by the group that between $4.5 and $6.5 billion needs to be refinanced prior to the end of 2012 and it noted there is a $94 billion capital requirement estimated for the whole Australian energy sector over the next 5 years.[9]

These are significant financing targets and an investment environment with a high level of certainty will be required to achieve them.

One of the main types of certainty that investors need is regulatory certainty. Under the MEU proposal, despite excellent performance by international standards in both price and reliability, the NEM would undergo radical change.

[9] https://www.qrc.org.au/_dbase_upl/IRG%20Report.PDF

The proposed rule change could significantly devalue the existing large investments in the industry by the incumbent participants.

In addition to the effects on existing investments, the proposed rule change would have two effects on prospective investors in the sector, both incumbent and new entrants.

Firstly, it would make further investment in the NEM a less attractive proposition as the rate of return on investments could be significantly lower.

If the conclusion is drawn by investors that the investment environment may no longer be attractive enough then the market may not generate the required amount of capacity construction needed to keep pace with expected consumption and capacity retirement expectations.

Secondly, the NEM would no longer be viewed as a certain regulatory environment. Where major change is made on the basis of very intermittent concerns against a backdrop of excellent performance, investors may conclude that the barriers to radical market redesign are very low and investments and investment decisions should carry a high risk premium to accommodate this reality.

If the MEU proposal results in delayed or cancelled investment, and investments that include high risk premiums, then it could ultimately result in capacity shortfalls and higher cost generation options being selected, with flow-on effects to pool prices.

8. Investment Levels

It is worth noting that if pool prices were too high as claimed by MEU we could expect to see excessive investment, particularly in small peaking plant. This is not the case. In fact, we are seeing appropriate but not excessive levels of investment over recent years across the entire NEM. Despite the upcoming investment needs noted by the IRG uncertainty with regard to carbon pricing is reported by industry participants as deferring baseload generation investment and additional regulatory uncertainty from a NEM redesign would exacerbate this situation.

The AEMO Statement of Opportunities 2010 highlighted significant reserve deficits in upcoming years which will need investment to occur to maintain current levels of reliability. If the market is distorted by the MEU proposal, either in terms of average pool prices or in terms of a skewed distribution of pool prices (perhaps with fewer high price events but higher spot prices in periods of lower demand), then the market may no longer deliver the appropriate, and most efficient investment signals. In particular, if pricing is skewed higher at lower demand levels, peaking plant, which may be the most economically efficient response, may be displaced by higher cost alternatives.

If this occurs then either a higher Market Price Cap or capacity payments may need to be considered to ensure delivery of appropriate additional capacity. The costs of these remedies to market distortion would eventually pass through to energy consumers.

9. Risk Management Options Already Available

There are already many options available for energy users to remove or reduce their exposure to high pool prices in the NEM.

A sophisticated and liquid market exists where forward electricity prices can be set at fixed prices or at capped prices. There is ample liquidity and variation of risk management products for large end users. The market for $300 caps in particular is available and liquid. If a large energy user was concerned about prices above $300/MWh, they are able to take out protection in the form of these $300 caps.

As such, there is no need to artificially try to restrict the market's movement above this level. Protection can be readily obtained for movements beyond this level at a competitive, market-determined price. These contracts are widely used in the industry particularly by retailers to prudently manage their pool price risk.

Large energy users, as sophisticated consumers, are aware of this market and the ability to hedge their exposure to high pool prices. That some large users choose not to take out what is in effect insurance against high spot prices is an active commercial choice with its own risks but it should not form the basis for calls to redesign a well functioning electricity market. There is some 'moral hazard' in responding to sophisticated market participants who do not appropriately manage their risk by intervening in the market to artificially suppress that risk, particularly in a well functioning market.

For smaller business users there are a number of electricity retailers offer fixed price plans for businesses or time of use plans with stepped, predictable pricing. For very large consumers of electricity there is also the ability to deal directly with generators and negotiate long term fixed or fixed with fuel cost pass-through supply contracts.

High spot prices during periods of high demand on the NEM are not a reason for market intervention when a range of options are readily available to remove this risk for businesses.

It is important to note that not all large energy users support this proposal. Industry feedback indicates that there are large energy users with arrangements in place to hedge their exposures who do not support the proposed change.

10. Isolated Concerns

In any case, the isolated incidents cited by the MEU are not cause for re-engineering the marketplace. Even if the AEMC analysis of these episodes identifies areas of concern, the appropriate response should not contemplate changes that could fundamentally alter and compromise the market.

The Australian Government's Taskforce on Reducing Regulatory Burdens on Business's report *Rethinking Regulation* contains a number of principles of good regulatory process that may be of assistance in assessing the merits of the MEU proposal.

Of particular relevance is the guidance that regulation should be carefully targeted, proportionate[10], and risk-based where appropriate, and that they should be principles based[11], rather than attempting to hard-wire the market from top to bottom.

The MEU proposal draws on isolated concerns to justify a wholesale market redesign - the main example cited by MEU, at a minimum, is not indicative of any systemic issue. The MEU proposal seeks to hard-wire price levels set to manage extreme market events into the regulation for regular market operation.

The proposal is a wholly inappropriate response to any perceived isolated issues and its continuing presence as an option is damaging to market confidence and could impact investment decisions.

11. Other Market Responses

Demand side response is an emerging market mechanism for addressing peaks in demand, peaks in wholesale market prices and to provide reserve capacity through interruptible load management. As with new generation capacity this demand control capacity relies on the investment price signals created by high spot prices during periods of high demand or a shortage of supply.

We are advised by participants in this industry that the distortions to the market that could be generated by the MEU proposal could pose risks to the development of this emerging industry market mechanism. Large energy users in the NEM should be best placed to take advantage of this demand-side market and the opportunity is expanding to smaller energy users as the technology is developed.

[10] http://www.regulationtaskforce.gov.au/__data/assets/pdf_file/0007/69721/regulationtaskforce.pdf p. 7.
[11] Ibid., p. 146.

12. Regulatory Response

In relation to AEMC's proposal to consider the creation of market rules to address issues of perceived market power the industry is already subject to processes and legislation that adequately address any concerns around market power under the Commonwealth *Competition and Consumer Act* (2010) (CCA). There is no requirement for, or benefit in, duplication of processes, existing legislation or regulatory oversight. AFMA views any concerns around the scope of the CCA as matters for the responsible agency and Minister.

AFMA appreciates the need for the AEMC to analyse the efficiency of the NEM and whether market signals, including price volatility, are appropriate to drive new entry plant and meet the long-term interests of customers. However, we are not convinced this extends to a general discussion on market power, as such we question the desirability of requests for information on the exercise of "market power". This information should be directed towards the appropriate regulator, and may not be appropriate in the context of a rule change request. We would ask that AEMC reconsider this request.

13. Conclusion

The objective of the National Electricity Law is to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

(a) price, quality, safety, reliability and security of supply of electricity; and

(b) the reliability, safety and security of the national electricity system.

The MEU rule change proposal would impede the achievement of these objectives. It would amount to an unjustified, radical market redesign, it would seriously impact the secondary market, distort price signals in ways that may impact generator viability and investment, and could produce inefficient generation outcomes.

The MEU proposal should be discounted as soon as possible, to remove it as a threat to the market's confidence and investment environment and any concerns entities may have with market power be directed to the appropriate regulator and dealt with in a separate process under existing legislation.

Whatever the outcome of any AEMC's proposed investigation into 'market power' could be, the MEU proposal would not be a suitable solution. As such, AFMA does not support the keeping the proposal on the table while any such investigation is undertaken as proposed in AEMC's Assessment Framework Decision Tree.

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