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Australian Energy Market Commission  
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## **National Electricity Amendment (Potential Market Power in the NEM) Rule 2011: Consultation Paper**

The Energy Supply Association of Australia (esaa) welcomes the opportunity to make a submission to the Australian Energy Market Commission's (AEMC) Consultation Paper for the Potential Market Power in the National Electricity Market (NEM) Rule change proposal.

esaa is the peak industry body for the stationary energy sector in Australia and represents the policy positions of the Chief Executives of over 40 electricity and downstream natural gas businesses. These businesses own and operate some \$120 billion in assets, employ over 52,000 people and contribute \$16 billion directly to the nation's Gross Domestic Product.

### Introduction

The stated purpose of the proposed Rule change is to constrain the exercise of market power by generators in the NEM. It contends that during periods of high demand, some large generators do not face effective competition and have the ability to use their market power to increase the wholesale price.

To address this, the Rule change seeks to empower the Australia Energy Regulator (AER) to declare certain generators as "dominant" when regional demand exceeds a specified level. Such generators would then be prevented from offering available capacity at any more than the Administered Price Cap (currently \$300/MWh) when demand is above the pre-specified level.

esaa does not support the making of this proposed Rule, or indeed any similarly constructed 'more preferable' Rule, as it would undermine the operation of the current market model. The Association notes that transitory market power and price spikes are an intended feature of the energy-only market design of the NEM. It does not consider that there is evidence of the NEM failing to deliver sound outcomes or evidence of generators having sustained market power. It considers that the proposal would be an excessive and unwarranted infringement on the behaviour of generators that would distort the market's operation, interfere with price signals and could have deleterious unintended consequences, such as deterring new entry.

The NEM is highly competitive with some of the lowest priced supply of wholesale electricity in the OECD. While electricity markets may have some features that are not common to many commodity markets, in practice they operate as any other market within the economy but with generally greater transparency.

The *Competition and Consumer Act* (CCA) provides the framework for competition and fair trading laws in Australia. Part IV of the CCA prevents participants from misusing market power or acting in an anti-competitive manner. The Rule change proposal focuses on issues of market power and its potential misuse. The Association does not consider that there is any case for the AEMC to be examining issues of anti-competitive use of market power.

esaa considers that the AEMC should make it clear throughout this Rule change process that their focus is on examining whether the proposed Rule would improve or weaken the efficiency of the NEM. It should not be an indirect examination of alleged anti-competitive use of market power, which is the proper remit of the Australian Competition and Consumer Commission.

#### *Electricity market design is a difficult and enduring question*

Electricity supply is technologically complex, capital intensive and characterised by long-term investments in the order of 30 to 50 years. A reliable, secure and least cost supply of electricity is important to both the economy and the community. Electricity also has unique physical properties, such as the need to match supply and demand in real time and the inability to control power flows through a system. For these reasons, the best way to deliver electricity is an enduring and difficult question facing policy makers, both in Australia and overseas.

The current market structure of the Australian energy sector is the result of ongoing National Competition Policy reforms applied across the Australian economy since the early 1990s. Over the past two decades successive federal and state governments have pursued an extensive reform program that dramatically changed the electricity supply model. This reform program included: physical interconnection, structural separation, corporatisation, privatisation, creation of formal physical and financial markets and regulatory frameworks.

The guiding principle through this reform has been that the best way to deliver the electricity supply the community expects is by transferring primary responsibility for supply from governments to markets, with essential consumer protections retained by governments through the aegis of specialised agencies. This has seen decentralised, commercially-driven decision-making by private and corporatised entities replace the old paradigm of centralised decision-making.

#### *The NEM energy-only market*

As formal electricity markets are not usually organic but must be created, a key decision is the choice of market model and there is no definitive answer on the best approach. Unsurprisingly, a range of different models have been adopted around the

world, and indeed, within Australia.<sup>1</sup> For Australia's east coast interconnected electricity system, policy makers chose to implement an energy-only market.

The design features of the NEM's energy-only market are well-understood. It is a mandatory gross wholesale pool into which generators sell their electricity. Bids are dispatched by AEMO on an economic merit basis (subject to reliability and security constraints), with the price set by the marginal generator. This imposes powerful competitive discipline on generators to bid at, or even below, short-run marginal cost (SRMC) as they must compete with each other through the interconnected system by submitting bids for every five minute dispatch interval. Unlike other market designs, such as in the Wholesale Electricity Market in Western Australia, the NEM does not provide additional payments to generators for capacity or availability; generators are only paid for the electricity they generate.

However, an integral feature of the market is its ability to experience high-priced events (up to the market price cap which is set at \$12,500/MWh). Although high-priced events are relatively rare, they provide the necessary revenue for peak load stations to switch on and enable base-load stations to bid at or below SRMC for much of the time. Most importantly, high prices raise the volume weighted pool price and provide the signal for new investment and new competitors.

*Transitory market power is an acceptable part of the market design*

Co-existing with the competitive discipline of the NEM's market design is the characteristic that generators occasionally have transitory market power to achieve price spikes to many multiples of average prices. As such, by design, the energy-only NEM is not a perfectly competitive market and does not produce prices that would be consistent with perfect competition.

Price spikes are essential in an energy-only market to support sufficient generation capacity, including at the extreme peaks of demand, and to enable more regularly dispatched generators to earn sufficient revenue to cover their fixed costs, which can be a significant proportion of their total costs.

Generation dispatched to meet occasional peaks in demand may not be required for the majority of the year and must be able to earn sufficient revenue when it does run to contribute to its year round fixed costs. Hence the need for transitory market power to produce occasional high prices.

Price spikes are also required to elicit immediate supply and demand responses following technical factors, such as the loss of a generating unit, damage to the network or other such unplanned outages. They also have a crucial role in signalling the need for new investment over the medium term.

However, when generators bid above SRMC, they increase the chance of not being selected by the NEM dispatch engine to generate, which could have consequences including missed opportunities to earn revenue and a failure to underpin contract volumes. Baseload generators also have an incentive to be dispatched to avoid

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<sup>1</sup> For instance, a different model to the NEM has been adopted in Western Australia's South West Interconnected System.

having to shut plant down, which is costly given the stress it places on plant and the time taken to resume operation. This incentive at times results in generators bidding significantly below zero towards the market price floor (currently at -\$1,000/MWh). Bidding at SRMC means that generators will be compensated for their variable costs if their bids set prices. As SRMC is below the long run marginal costs that generators need to cover to be viable, they rely on periods of high prices to contribute to recovering fixed costs.

Competition/anti-trust literature and legislation recognise that most firms will have opportunities to exercise market power but that market power needs to be 'significant' and 'durable' to warrant concern.

Church & Ware in *Industrial Organization – A Strategic Approach* state that 'significant' means that prices exceed not only marginal cost but long-run average cost while 'durable' means that the firm is able to sustain its economic profits in the long-run.

#### *Types of market power*

esaa considers that there is no conclusive evidence that generators have sustained market power and are able to use it in a way that adversely impacts the market. The Association agrees with the conclusion of the Energy Reform Implementation Group (ERIG) in 2007 that:

“the ability of generators to raise prices from time to time (representing, in total, a small percentage of total time) does not, by itself, indicate a generator has market power. Energy only markets use price as the signalling device to induce new investment. Sustained market power requires generators to sustain average pool prices over long periods above their economically efficient level. ERIG has received no evidence of sustained market power problems across the NEM as a whole.”

ERIG also confirmed that spot market volatility is an inherent feature of an energy only design and, as a result, there are a range of prices in which the market can be said to be workably competitive.

Volume weighted average pool prices are well below new entrant long-run marginal cost which would suggest that any opportunities to exercise market power are neither 'significant' nor 'durable'.

In Calendar year 2010, there were only 148 periods where spot prices were above \$1000/MWh. That is only 0.169 per cent of price periods. In contrast, the number of pricing periods where spot prices were negative was 255 (or 0.291 per cent of price periods). In fact, with generation supplies now recovered from drought, volume weighted average pool prices for 2010-11 are significantly lower in most jurisdictions, even in nominal terms, than in 2000-01.

**Table 1: NEM volume-weighted pool prices by region 2000-01 and 2010-11 (nominal)**

| Region  | NSW   | VIC   | QLD   | SA    | TAS                |
|---|-------|-------|-------|-------|--------------------|
| Average price – volume weighted 2000-01 (\$/MWh) <sup>2</sup> | 40.67 | 48.80 | 45.22 | 68.28 | 44.57 <sup>3</sup> |
| Average price – volume weighted 2010-11 (\$/MWh) <sup>4</sup> | 44.27 | 34.48 | 42.69 | 31.23 | 29.13              |

The key feature of a competitive market is the threat of new entry. Any market participant exercising market power, by **sustainably** raising price above long-run marginal cost, will face competition from new entrants provided there are no significant barriers to entry.

According to esaa’s Electricity Gas Australia 2011, in the NEM there are currently 1,871 MW of generation projects under construction, 6,141 MW at advanced planning stage, and 31,102 MW proposed. While not all of these power stations will ultimately be commissioned, reflecting different commercial and policy drivers, this investment activity gives an indication of the success of the NEM in encouraging new entry and disciplining market power. It should be noted in this context that the future investment environment for the NEM is being impacted by the current uncertainty on greenhouse policy and in particular, the transitional arrangements for the energy industry.

Competitive pressures on generators, both from competitive bidding and new entry, can emerge from throughout the NEM given its interconnection. For this reason, the Association does not support the Rule change proposal examining the market in regional terms. The notion of a NEM-wide market was supported in a ruling in the Federal Court of Australia.<sup>5</sup>

*The proposed rule change would prevent efficient market operation*

The Association considers that the proposed rule change would be an excessive interference with the market’s operation. As set out in this submission, transitory market power is an intended part of the NEM’s energy-only market design and is necessary for the market to operate. Impinging on this feature through the insertion of price caps significantly below the market price cap would strike at a core feature of the market model and could have a range of negative unintended consequences.

In empowering the AER to impose restraints on the bidding behaviour of certain participants, this Rule change would give regulators a lever in addition to the reliability settings to control the bidding behaviour of generators and hence the price

<sup>2</sup> Snowy Region was not included in this analysis.

<sup>3</sup> Tasmania was not part of the NEM in 2000/01, so 2004/05 data has been used instead

<sup>4</sup> 2010-11 data is from 1 July 2010 to 5 June 2011.

<sup>5</sup> Australian Gas Light Company v Australian Competition & Consumer Commission (No. 3) [2003] FCA 1525 (19 December 2003)

outcomes. This is not supported as it would impose an arbitrary price constraint on segments of the market. This would be a further deviation from the principle under a decentralised supply model that prices should be set by the market as it would empower regulators to set the 'right' price of electricity that balances the trade-off between price and reliability. The tools to achieve this trade-off are an in-built feature of the NEM's design.

Far from removing barriers to entry, the proposed Rule would actually erect them by reducing incentives to invest in the NEM and raising regulatory risks. It would interfere with the price signals provided by the spot market (and have consequential impacts on the contract market), which could have impacts on the investment signals provided for investors. It could also have other harmful dynamic effects, such as becoming a barrier to entry by creating a regulatory risk that generators could be declared 'dominant' as market conditions change over time. It could also distort the decisions of potential new entrants by inserting a bias away from larger plant, with potential losses of economies of scale. These outcomes would be to the detriment of energy users.

### Conclusion

The NEM's energy-only market design was an explicit choice of policy-makers. The Association considers that it should be allowed to operate as intended rather than be constrained by unwarranted infringements on market participants' behaviour. Tempting as it can be for policy-makers to try to remedy perceived faults with the market design by constraining participants' behaviour, such constraints introduce distortions into the market that usually have unintended adverse consequences.

This proposed Rule is such an instance. Firstly, no evidence has been put forward that there is a problem that requires a solution. The proponents allege market power, but the examples they give are transitory - when prices are taken as a whole, over a long period of time, and compared with the cost of new entry – it is hard to argue that consumers are not paying a fair price for their electricity – i.e. one that allows for appropriate signals to be sent when new supply is required.

Secondly, it is not clear that if there was market power abuse in the NEM that any remedy through the rules rather than through standard competition law would be appropriate. esaa notes that the wholesale market is one of the most transparent markets in the world, with ex post bid data published in full. Thus, there is no lack of information available in order to prosecute a competition law case, should that be necessary.

Finally, the remedy proposed in the rule is heavy-handed regulation, where a generator can be identified as dominant and constrained in their bidding without any evidence that they have bid in a way that exhibits enduring market power. Presumably, the proponents consider that they will benefit from such constraints through lower prices. But such artificially depressed prices will inhibit signals to new supply that it is required. Consequently, supply will tighten and average prices will rise accordingly. Thus the rule may undermine its own intended outcome.

If stakeholders no longer consider that the energy-only design of the NEM is working and delivering the right balance between price and reliability, then the question that

needs to be asked is what market model would deliver satisfactory outcomes for the Australian community.

The best market design is a perennial question around electricity policy.

However, the effects of carbon policy uncertainty on the market would cloud any assessment of this question right now. Once carbon policy decisions have been resolved and implemented, it may then be timely for the Ministerial Council on Energy to direct the AEMC to monitor the performance of the market in order to confirm that market mechanisms provide on the one hand adequate signals to drive timely and efficient investment and on the other hand, sufficient competitive tensions to ensure that transitory market power will be eroded over a time frame consistent with the characteristics of the industry. Such an approach would be preferable to introducing distortions into the current model as proposed in this Rule change.

Any questions in respect of our submission should be addressed in the first instance to Kieran Donoghue, by email to [kieran.donoghue@esaa.com.au](mailto:kieran.donoghue@esaa.com.au) or by telephone on (03) 9670 0188.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Brad Page', with a stylized, cursive script.

**Brad Page**  
Chief Executive Officer