Major Energy Users Inc.

Australian Energy Markets Commission

National Electricity Amendment (Generator ramp rates and dispatch inflexibility in bidding) Rule 2014

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Comments on the Draft Rule Change

Submission by

The Major Energy Users Inc

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Executive Summary

The Major Energy Users Inc (MEU) welcomes the opportunity to provide comments on the AEMC's Draft Rule Change issued as part of its assessment of the rule change proposed by the AER to address the observed use by generators to bid ramp rates at levels lower than their machines are capable of performing.

In its response to the Consultation Paper the MEU commented that it saw the AER proposed rule change as a key element of ensuring the Electricity Rules did not allow generators to use their market power to cause consumers economic harm. The MEU noted that generators were using artificially low settings for ramp rates to improve their financial outcomes by effectively constraining on faster start generation for short periods of time or by holding up prices and constraining off lower priced generation. The MEU noted that such an outcome was less efficient than generation being dispatched in its merit order and that the AER proposal was focused on achieving a more efficient market.

The MEU supported the rule change proposed by the AER and sees that, even though the AEMC considers that the concerns raised by the AER could be considered to be immaterial, it has recognised the need for change to the Rules.

The AEMC considers that the AER proposal is not appropriate and has proposed a preferred rule change. The MEU has reviewed the preferred rule change but considers that the AEMC has not provided any evidence that its preferred rule will achieve the aims of the AER proposal. The AEMC has not provided any substantiation for its conclusion that requiring every generation unit to provide a minimum ramp rate of 1% of maximum rated capacity/minute will deliver better outcomes for consumers than the existing rules or that the concerns of the AER will be addressed by the preferred rule.

The MEU considers that the analysis carried out by the AEMC regarding the issues raised by the AER is deficient. Further, there is little analysis supporting the contention that the AEMC preferred rule will provide a better outcome for the long term interests of consumers. On this basis the MEU does not support the AEMC preferred rule and considers that the AER proposed rule is more appropriate.

The MEU has provided a different approach which it considers addresses the concerns of both the AER and the AEMC and allows generators to set their own ramp rates under competitive conditions and for this to be used at times when there is congestion in the network.

1. Introduction

The Major Energy Users Inc (MEU) welcomes the opportunity to provide its comments on the AEMC's draft rule relating to the AER rule change proposal on generator ramp rates and rebidding.

The MEU notes that the AEMC draft rule is being made in an environment where there is significant over-supply of generation in the NEM[1] which has been driven partly by consumer responses to the very high prices for electricity that they increasingly have faced, and by the incentives provided by governments to install renewable energy generation.

Despite this over-supply, consumers have seen and are still seeing generators use their market power to increase their revenues. That this occurs is understandable as, in an over-supply condition, generators will use whatever opportunity is available to them to increase their revenues, if only to assist in recovering their fixed costs.

The AER rule change proposal addresses an element of generator market power which enables some generators to cause harm to consumers and other generators by the exercise of the market power these generators have from time to time. This market power is enabled by congestion in the transmission network which provides a mechanism for certain generators in certain parts of the network to offer ramp rates well below the capability of the generation units involved. By doing so, these generators are able to accrue greater revenue than they would if there was full competition.

The electricity market is predicated on maximising competition as this will result in the most efficient outcomes for consumers. The AER has identified that this loss of competition can be rectified by requiring generators to offer ramp rates that reflect plant capability.

1.1 The Draft Decision

The MEU notes that the AEMC accepts the principle implicit in the AER proposed rule change - that the current rules allow generators to use their ramp rates to cause the electricity market to be dispatched inefficiently by causing dispatch not to follow a merit order based on prices offered to the market. After accepting the principle in the AER proposal, the AEMC has reached a view that the AER proposal does not provide the best approach and that a more preferable rule would better achieve the National Electricity Objective (NEO).

[1] AEMO forecasts are that no investment in generation is required in the NEM for at least a decade.

Despite AEMC agreement with the AER that a rule change is needed, the MEU notes that the AEMC disagrees with the AER contentions that the AER proposed rule would result in:

- Improved system security. The AEMC observes that there has been no observed issue with system security since the 2009 rule change on ramp rates. The AEMC therefore concluded that the proposed rule change would not provide AEMO with greater ability to manage the market as AEMO was already able to manage the market efficiently in this regard.

  The MEU agrees that system security has not been an observed issue as, under the rules, if there is a problem with system security, AEMO has the power to constrain on or constrain off any generator in order to maintain system security. In fact the market has seen significant inappropriate pricing (unnecessarily high prices, counter price flows, etc) as a direct result of AEMO exercising its powers to maintain system security. While system security is not an issue as such, the cost to consumers for achieving it is unnecessarily higher than it need be.

  Despite system security not being observed to be an issue in recent times, the MEU notes that there are massive changes to the electricity market that are occurring as a result of the renewable electricity target both within the large generator sector (where large wind power farms proliferate) and the small generation sector (where residential energy efficiencies and roof top PV solar have been major forces for change). With these changes continuing to occur, the AEMC should have investigated whether this continuing change will lead to greater system security issues as alluded to in a number of stakeholder responses to the AEMC Consultation Paper.

  In particular, the MEU notes that the increasing penetration of intermittent generation has required (and will require more so in the future) increasing amounts of high ramp rate generation to respond to the large amount of intermittent generation. While system security might not have been an issue to date, imposing a requirement for higher ramp rates rather than lower ramp rates will be needed to provide the necessary investment for generation plant to complement the increasing amount of intermittent generation; therefore an increase in the minimum ramp rates would be in the long term interests of consumers.

- Counter price flows are material. The AEMC contends there is no compelling evidence that counter price flows are material. The MEU begs to differ on materiality. It is clear that some generators are using their market power to bid ramp rates well below the capability of their generation units and therefore there must be value in them doing so. In terms of the overall size of the market turnover, the impact of counter

price flows might be small, but obviously still valuable enough for generators to cause this to be outcome.

The MEU relates this view on materiality to the banking scam where the last few cents in a large number of bank accounts were redirected to a scammer's account. This action by the scammer was small in terms of the overall trading by the banks but extremely profitable to the scammer - so much so that the scammer was jailed. The MEU is concerned that the AEMC view on materiality is similarly flawed.

- Loss of productive efficiency. The AEMC avers that rebidding of ramp rates which inhibits a true merit order of dispatch might not exhibit a loss of productive efficiency because the decision to bid or rebid low ramp rates might be driven by the opportunity costs of not being dispatched. This reflects the AEMC view of the market as one obsessed with supply side needs and considerations, despite the negative impacts on consumers. When seen from the demand side, requiring consumers to pay a higher price for power because a generator can force an outcome that allows it to continue to receive higher prices than merit order would dictate (particularly when the generator is otherwise capable of operating at a ramp rate needed by the market) is not in the long term interests of consumers.

  The AEMC assessment, by only looking at the impact on the supply side, fails to register that the unnecessarily high prices impose deadweight losses on the demand side causing a loss of productive efficiency in the downstream operations. The AEMC compounds its flawed assessment on productive efficiency by citing that, even if there was a loss of efficiency, it is immaterial when viewed at the turn over in the market as a whole. The MEU view on materiality is stated in the preceding dot point

- Disincentive to invest in fast response plant. The AEMC posits that by imposing a requirement that all generation should offer ramp rates reflecting technical capacities, this will disincentivise investment in high ramp rate plant. Implicit in this view, is that such a requirement would be contrary to the NEO. The MEU does not agree entirely with this assertion. If generation plant has the capacity for a higher ramp rate than it offers to the market, then this incentivises inefficient investment in the market as new plant will be provided to meet ramp rates that could be provided by existing plant - such an outcome would ultimately impose unnecessary costs on consumers.

  Further, if an existing generator is known to have higher ramp rates than it offers to the market, it is unlikely that an investor would invest in plant with higher ramp rates knowing that any investment of such an additional

feature could well be made redundant should the existing generator decide to revert to its known capability.

The AEMC notes that Alinta and GDF assert that ramping capability may become more valuable over time and the MEU agrees that the increasing presence of intermittent generation could lead to this conclusion. Equally, if the ability already exists in the market for the necessary ramp rates to accommodate this intermittency then it is inefficient to provide new generation to deliver this feature.

1.2 Optional Firm Access

Throughout the draft rule determination, the AEMC makes reference to the potential of the Optional Firm Access (OFA) process to address many of the issues (including the ramp rate concerns raised by the AER) that currently are causing concern in the electricity market.

The MEU has previously observed that it supports the principle of the OFA but considers that it is still only a concept at this stage and, so far, there has been no firm decision on whether it can be implemented, what the rules might be to achieve its goals and if implemented whether it will address all of the issues that it is thought it would be able to correct.

The MEU has seen over the years a number of worthy concepts investigated because they might address a flaw in the electricity market, yet many have fallen by the wayside due to difficulties in implementation and in some cases, outright rejection by a significant part of the stakeholders in the market. The MEU is therefore wary that the belief in the OFA so obviously held by the AEMC might not be realised.

A review of the responses to the draft first interim report on OFA indicates a significant groundswell of opinion that the OFA is unlikely to meet the expectations of it in terms of value to the market. When this is coupled to the expected complexity and the risks inherent in its implementation, there appears to be a wide spread view being expressed by stakeholders (including consumers and generators) that further work on OFA should be discontinued

The MEU therefore considers that the AEMC has erred in placing so much reliance on OFA to address the concerns that have been raised by the AER in relation to ramp rates. The AEMC should address the AER ramp rate concerns on their merits rather than relying on the implementation of a concept that is still a long way from even being shown to be viable.

1.3 The AEMC more preferable rule

Whilst accepting that there may be problems that the AER proposed rule change was developed to rectify, the AEMC has rejected the AER proposed approach and considers a more preferable rule should be implemented.

By proposing a more preferable rule, the AEMC is effectively stating that the detriments of the AER proposal are greater than the benefits the AER rule change would achieve.

The AEMC has come to this conclusion without assessing whether its preferred rule would achieve the same or better outcomes than the outcomes of the AER proposal. At most, the AEMC considers that future generation investment might be put at greater risk with the AER proposal than with its preferred rule. What is concerning to consumers is that the AEMC has not provided a comprehensive comparison of the likely outcomes from the two options, or even if its preferred rule will rectify the short comings of the current rules that the AER has identified.

2. The AEMC more preferable rule

The AEMC more preferable rule is that each generating unit in the NEM will be required to offer a minimum ramp rate of 1% of its maximum rated capacity /minute. The AEMC considers that this will deliver a number of benefits that the AER proposal does not. Specifically the AEMC states its approach removes:

- The inconsistencies in the current rule
- An ownership bias inherent in the current rule in that each generation unit is treated on its merits rather than being assessed as part of a group

The MEU agrees that these features are supportive of achieving the NEO but notes that the AER proposal also delivers these benefits.

The AEMC also notes that its more preferable rule overcomes the concern that the rules should be technologically neutral. The MEU does not agree entirely with the AEMC on this issue and addresses this in more detail in section 2.5 below.

What the AER proposal would achieve is to limit the market impact where congestion in the network would incentivise a generator to offer a low ramp rate and thereby constrain on a high ramp rate generator and, by doing so, increase the spot price for its own benefit. In a similar way, the AER approach would limit the market impact where a generator, again with the benefit of a network constraint, can use its low ramp rate bid to constrain off other lower priced generators and hold the spot price artificially high. Neither of these core concerns have been discussed in the AEMC draft rule and its preferred rule does not address these concerns at all. Implicitly, by excluding any concern for these observable outcomes, the AEMC considers these effects are immaterial.

As is so often the case, the AEMC has also not addressed the concerns of consumers and has merely relied on what might be the impact on generators and generator investment to develop its position. For example, the AEMC notes (page 21):

> "Congestion in the transmission network can mean that generators have uncertain access to the market, in terms of their ability to be dispatched and receive the regional energy price. There is currently no mechanism that allows generators to hedge this risk. Instead, generators that are likely to be constrained off have an incentive to rebid to reduce the rate that they can be ramped down in order to reduce the extent to which their dispatch levels will be decreased."

Whilst the MEU accepts that this is an issue of concern for generators, generators have the ability to build into their pricing structure a premium to

accommodate the risks that they face - both in terms of the volatility in spot price they face and the potential for being constrained off. That the risk of being constrained off is caused by another generator using its market power could be addressed by removing this market power is not addressed at all.

There is no mention by the AEMC of the impacts on consumers of what the generator actions might result in, such as constraining off of lower priced generators, thereby exposing consumers to higher than competitive prices. Demand side stakeholders have no ability to hedge these risks yet and are expected by the AEMC to pay the costs that result from this market abuse by certain generators.

2.1 The core of the AEMC more preferable rule

The core of the AEMC more preferable rule is that every generation unit in the NEM should comply with a requirement to offer a minimum level of ramp rate. The AEMC considers that such a concept is required as it:

- Addresses the concern that the rules should be technologically neutral.
- Avoids the potential negative impacts of the AER proposal on an incentive to invest in generators with flexible ramp rates
- Provides certainty for investors
- Has lower associated management, operational and administration costs than the AER proposal

The AEMC makes these assertions but does not assess them in context of what the market has seen nor does it balance the benefits against the detriments of the AEMC preferred rule.

The AEMC approach does not analyse what the level of the minimum ramp rate should be to prevent recurrence of the generator gaming that caused the AER to propose a rule change; the AEMC merely posits that the minimum ramp rate should be 1% of maximum rated capacity/minute and that, when averaged across each region, there would be a distinct benefit for NSW and maybe for Victorian consumers.

2.2 The setting of 1%/minute as a minimum requirement

There is no explanation as to why the AEMC has elected to implement 1%/minute as its minimum ramp rate or even if it reflects the most frequently used ramp rates currently extant in the NEM. By not analysing the setting of the minimum level, the AEMC has to a great extent obviated the most important feature of the AER proposed rule change - that there is still an incentive for

generators to use ramp rates to make the NEM less efficient by allowing generators to "game" the market for their advantage when there is network congestion. Where a specific generator uses its market power when there is network congestion, the market cannot reflect a competitive outcome and therefore it is less efficient.

It is clear from the table 4.2 in the draft determination[2] that setting the minimum of 1%/minute, on average, will have little impact except in NSW and perhaps in Victoria. Yet it is not only in these regions that the problem identified by the AER has had the greatest impact. In fact, the AER provides a number of the examples of ramp rates being used to disadvantage consumers and other generators in Queensland where the changes based on the more preferable rule result are only modest. In South Australia, the more preferable rule would make matters a little worse!

Analysis undertaken by the AER, as part of its proposed rule change, indicates that ramp rates well in excess of 1%/min are a common feature of ramp rates offered by generators in the NEM, including by base load generators[3]. Under the current rule, small generators are required to provide ramp rates of 3%/minute although generators over 100 MW rated capacity are required to provide minimum ramp rates lower than this - the more preferable rule would reduce the ramp rates requirement for small generators, potentially exacerbating the concerns raised by the AER.

Other than to analyse AEMO data to identify (page 26)

> "that individual generators should be able to meet their minimum requirements under the more preferable draft rule"

the AEMC has not provided any analysis as to whether the ramp rate could be set higher than 1%/minute with perhaps exemptions[4] being allowed for generators which technically cannot achieve higher ramp rates.

It is clear from the responses provided to the AEMC to the Consultation paper, that ramp rates greater than 1%/minute are readily achievable[5] and this is

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[2] It is not clear whether table 4.2 addresses just dispatchable generation or is inclusive of all generation. If it includes all generation (including wind generation) then the table might well be providing a distorted outcome of the AEMC preferred rule because table 4.2 is based on averages rather than specific incidences.

[3] Those that technically cannot meet the current ramp rate requirements are granted exemptions

[4] The MEU understands that already a number of generators are exempt from the current ramp rate requirements for technical reasons. Apparently a number of coal fired generators (most notably brown coal fired generators which have quite limited ramp rates due to the type of fuel they use) have sought exemption from the current ramp rate rule on the basis that they cannot meet the requirement for technical reasons. When evidence is provided that this is the case, the exemption has been granted.

supported by the AER rule change proposal and its reports "spot price events above $5,000/MWh" indicate that under normal operations generators bid ramp rates considerably higher than the minimum except when the generators consider that by offering a lower ramp rate they will increase their revenues from the market.

This indicates that, perhaps, a higher minimum ramp rate than1%/minute could be set without imposing too great an impost on the market. Setting a higher minimum ramp rate would not unduly concern generators as the AEMC proposes to retain the existing rules that permit generators to offer lower ramp rates (page 26):

> "However, if individual participants are unable to meet the minimum requirements, the draft rule would retain the existing provisions that allow the generator to provide a brief, verifiable, and specific reason to AEMO as to why the ramp rate provided is below the minimum required. The AER would retain the ability to seek additional information from participants to substantiate and verify the reasons provided."

The inclusion of such an exemption readily allows for a higher minimum ramp rate being made a rule requirement than the 1%/minute posited by the AEMC. A generator, if it has a technical reason for not being able to comply with the minimum ramp rate, could seek an exemption, as well as have the opportunity to bid lower ramp rates than the minimum if it has sound technical reasons for needing to do so.

Both of these options already occur under the current rules and the AEMC proposes that they be retained.

2.3 The minimum ramp rate setting for the future

The AEMC has decided that a minimum ramp rate should be established and this seems to be based on the ramp rate of the generator with perhaps the lowest ramp rate currently in the NEM fleet. However, this does not reflect the expectations of the future needs of the NEM in terms of new generation.

There is no reason why a minimum ramp rate setting has to reflect the performance of existing generators, only that the AEMC considers that the setting should not impact on future investment decisions. The AEMC has not carried out

[5] For example even Macquarie Generation (a user of black coal) in its submission (dated 28 March 2014, page 1) comments "The vast majority of the coal-fired generation fleet in the NEM is now more than 30 years old with original design specifications accommodating a level of ramping capability in the vicinity of 1% to 2% of continuous maximum rating."

any research on what ramp rates future generation plant will be provided with - certainly there is no doubt that gas fired gas turbine and hydro plant will have much higher "normal" ramp rates than 1%/minute. Similarly wind turbines have quite fast "down" ramp rates and "up" ramp rates are less applicable to wind farms.

An approach to setting requirements for operation of the NEM in the future is more appropriate than one based on the existing fleet, especially as those existing generators which might not be able to achieve the minimum for technical reasons could be granted an exemption based on current Rules 3.8.3A(c) and (d).

The AEMC has not carried out any analysis of the needs for the future market. As the MEU notes earlier, the increasing incidence of intermittent generation (especially large wind farms and roof top solar) has highlighted the need for faster response generation to provide back up in the case of the wind changing, clouds gathering or dusk falling. Under an increasing amount of intermittent generation in the market, achieving system security would indicate a need for higher ramp rates than the minimum nominated by the AEMC which effectively reflects the needs of the market before the massive increase in intermittent generation that has been added to the market.

2.4 Location in the network is a major concern

The analysis by the AER highlights that ramp rates are not generally a concern for the large majority of the time. When they do cause a problem they are usually related to a specific location in the network where congestion has occurred and which is then used by generators to increase their revenues.

This indicates that analysis of the problem and its solutions should look at specifics rather than just the wide "catch all" approach proposed by the AEMC. The AEMC table 4.2 highlights that its preferred rule would lead to significant changes in NSW when assessed on **an average basis.** There is no analysis in the AEMC assessment as to whether its preferred rule would have resolved the specific examples cited by the AER in its proposal.

The MEU is concerned that the AEMC, by merely looking at averages across a region, has provided a solution that might imply the concern has been addressed but not actually achieving the outcomes desired. By not looking at the specific conditions and locations that give rise to the AER concerns and applying the preferred rule to these, the AEMC preferred rule might not only not address the issues raised but could make outcomes even worse for consumers.

2.5 Disincentive on new generation

As its major objection to the AER proposed rule, the AEMC has opined that the AER proposal might provide a disincentive for investment in generation (particularly high ramp rate plant) whereas the AEMC preferred rule would not do so, because it is "technologically neutral".

As noted earlier, the MEU considers that the long term interests of consumers (the focus of the NEO) could be better served by implementing a rule that increases the ramp rates required rather than reducing them, but allowing dispensations for technical reasons as currently apply.

In contrast, the AEMC has assumed that a technologically neutral minimum ramp rate would allow the market to decide what ramp rates are required. The reason supporting this assumption is that generators will always be subject to competition. But this assumption has proven to be false in that generators will use rebidding of lower ramp rates when competition is reduced to the detriment of the market if this results in them increasing their revenue.

By being technologically neutral, the AEMC considers this provides an incentive for investment in fast ramp rate plant when the market sees this is required. The MEU disagrees. The primary drivers of a technology decision by an investor are:

- The purpose for the generator - base load, intermediate or peaking plant,
- The desired fuel,
- Price of the plant,
- The selection of the specific brand of generator (eg Siemens vs GE),
- The location of the generator.

The ramp rate of the plant is an outcome of these decisions rather than ramp rate being a driving issue behind the investment decision.

Therefore, to make a rule based on an assumption that ramp rate is a core element of an investment decision is flawed. What the AEMC also overlooks is that the rules specifically allow for a generator to seek an exemption from the ramp rate rule if one of the primary drivers leads to a lower ramp rate than the minimum set.

The MEU accepts that high ramp rate plants have the ability to provide energy when it is most valuable to consumers (ie has a high price tag attached) and to ramp down quickly when costs exceed prices; this merely reflects the concept behind the market that competition drives the most efficient outcome. What the AEMC fails to address is where the actions of a generator with the power to set prices because of its unique location (ie where there is network congestion) uses

this power to bid very low ramp rates to drive an outcome that is not in the long term interests of consumers.

What is also absent from the AEMC analysis is that generators which are able to use congestion and make low ramp rate bids, provide a disincentive for other generators to invest. The import of this lack of recognition of the issues by the AEMC is a key aspect which the MEU considers would impact on assessment of the benefits/detriments provided by the AEMC more preferable rule proposal.

2.6 Impact on volatility

The AER makes an important observation that not addressing the ramp rate issue correctly will result in increased volatility in prices. The MEU agrees and considers that the AEMC preferred rule would not reduce market volatility but, moreover, would have the potential to increase volatility in the future as more intermittent generation is introduced into the market.

The MEU accepts that an energy only electricity market intrinsically exhibits volatility. However, where there is competition at all times, there is a degree of predictability (where high prices result from clear market drivers) and this reduces the costs for managing the volatility. Volatility from the exercise of market power is unexpected (and unnecessary as market rules can be implemented to prevent it) and therefore there can be higher costs to manage the specific risk.

Volatility comes at a cost to all involved in the market - to generators exposed to the spot market when a generation unit fails or is constrained off, to retailers that pay a premium for hedges and are exposed to the spot market for a least some of their volume, and to consumers directly exposed to the spot market. The cost of this volatility ultimately resides with consumers who have to pay the costs associated with managing the risks. Therefore limiting volatility where possible is in the long term interests of consumers, even if participants can hedge[6] some or all of their risk.

This means that, wherever practical, attempts should be made to reduce volatility. The AER proposal looks to minimise volatility whereas the AEMC preferred rule has not been tested as to whether it results in less volatility or not.

[6] Hedging a risk with a counterparty still results in a cost to the market as a counterparty will seek to ensure that the cost of the hedge exceeds the costs that it is likely to incur from the volatility

2.8 Summary

Whilst the AER devoted considerable analytical effort into identifying the most effective way of overcoming the problem they had observed, the AEMC has provided little analysis of what really occurs in the market and how generators operate when subject to competition and when not.

Despite this lack of analysis, the AEMC has still provided a more preferable rule which it contends is a better rule than that proposed by the AER even though the AER had undertaken considerably more analysis into the problem identified.

In this regard, it is important and informative to note that regulators in other competitive electricity markets consistently analyse what actually occurs in the market and use this information to inform themselves as to the most appropriate course of action[7],[8]. In contrast, the AEMC approach has not provided any analysis to inform as to whether its view that a minimum 1%/minute ramp rate is an appropriate setting or not, other than it should be achievable by all generators (except for those that can't and have to seek an exemption). Certainly there is no analysis provided by the AEMC that shows whether its preferred approach would address the concerns highlighted by the AER and exhibited in specific parts of the network where bidding and rebidding of ramp rates has created the ability to exercise generator market power through "gaming" ramp rates.

Setting a minimum ramp rate at the level proposed by the AEMC might not achieve the outcomes needed to overcome the very real concerns identified by the AER as the exercise of this power is permitted by specific network conditions which were not investigated by the AEMC.

The MEU therefore considers that the AEMC preferred rule is not better than the rule proposed by the AER.

[7] See for example the actions of regulators in UK, Ireland, US (FERC, PJM, NYISO, ERCOT) and Canada (Ontario) when assessing appropriate actions and controls on the exercise of generator market power.

[8] For example, the New York Independent System Operator (NYISO) uses a two step approach to market power mitigation, checking first the *conduct* of a generator in making offers, and second analyzing the price *impact* of the offer. The decision as to whether to adjust a price offer is carried out automatically by a program which checks for offers that are outside of established limits, and if so whether an offer would have a significant impact on the market price or payments to the generator.

3. An alternative to the AEMC preferred rule

Rather than setting a general minimum ramp rate across the market as proposed by the AEMC, through deeper market analysis the ramp rate bids actually made when the generators are subject to competition, the AEMC should have identified what are the "normal" ramp rates[9] for each generation unit operating in the NEM. "Normal" ramp rates would be those that a generator would use when exposed to competition and would reflect the trade off between ramp rate capability and costs incurred that the AEMC refers to in its draft determination[10].

By allowing generators (through their own actions) to set their "normal" ramp rates to be those that apply when they are subject to competition, would identify what ramp rate each generator unit has set to reflect its most efficient level. These levels are those that reflect the decisions made at the time of the investment and would reflect each generator's view of the ramp rates that meet their own criteria for the least cost solution for dispatch decisions and ramp rates to achieve the desired outputs.

Once identified, if a generator offers ramp rates less than their "normal" ramp rate for any reason other than a legitimate technical reason then they would be subject to sanction. As the AER concerns only arise when there has been congestion on the network the AER would only have to assess whether the "normal" ramp rate was used by a generator when a price abnormality[11] has occurred.

Such an approach would:

- Reflect the current rules where a generator can bid lower ramp rates than the minimum under certain circumstances
- Allow generators to set their own price/dispatch/ramp rates at the most cost effective levels
- Not impact on any generation investment decisions
- Ensure that dispatch merit order would be maintained
- Preclude generators from using ramp rates to exercise their market power

Most importantly, from the view of consumers, such an approach would result in an outcome that would address the concerns identified by the AER in its rule change proposal, but would also reflect the AEMC concern that ramp rate bidding is an essential part of the overall price/dispatch decision which balances the

[9] It is interesting that the earlier versions of the rules required generators to provide to NEMMCo (now AEMO) their normal and maximum ramp rates, for example as seen in version 1 of the Rules schedule 3.1
[10] See for example Draft Rule Determination page iii, para 2
[11] Such as for counter price flows, where a report is received from AEMO that a generator was constrained on or off or where there has been a high price abnormality which the AER would review

costs of operation and maintenance with the prices and dispatch conditions offered into the market.