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 Options Paper

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 Options Paper 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.

The MEU considers that the AEMC should have explored in more depth the option for assessing what the NEM requires as a ramp rate to maintain security without AEMO implementing its powers to constrain on/off generation to maintain security.

In the absence of such investigation, the AEMC is merely perpetuating market rules based on what has been done in the past rather than what will be needed in the future.

The rules could then be set based on market needs and providing exemptions coupled with lower ramp rates for non-compliant generation.

As a part of this option, the settings for higher ramp rates (eg 1.5 or 2% of maximum capacity/minute) should/could be evaluated as the MEU suggested in its response to the preferred draft rule.

The MEU still considers that the AER approach to the issue is more likely to reduce the exercise of market power by generators and thereby better meet the National Electricity Objective.

The MEU considers that the three options provided as the preferred draft rule and the two options outlined in the Options Paper provide worse outcomes for consumers than the AER proposed rule. With this in mind, the MEU has attempted to identify which is the least worst of the AEMC options.

Table 3.1 in the Options Paper provides a clear indication of which of the three AEMC options would best meet the needs of consumers. This table highlights that option 2 provides a net improvement in aggregate ramp rate capability for every region whereas the other AEMC options result in reductions in aggregate ramp rates in some regions which is not in the long terms interests of consumers.

Analysing option 2 against the key criteria noted in section 2.1 above indicates that there is unlikely to be a net detriment to consumers from its implementation.

On this basis, the MEU considers that AEMC option 2 is the least worst of the AEMC options.

1. Introduction

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

The MEU notes that the AEMC released its Options Paper as it had noted that (page i):

> "On the whole, submissions to the draft determination were supportive of the Commission's more preferable draft rule in principle. However, some stakeholders provided evidence that compliance with the more preferable draft rule might not be practicable for some participants, particularly certain large thermal generating units.

The MEU is very concerned at this statement. A review of the AEMC website shows that the AEMC received 14 submissions with 10 coming from generators, two from consumers and one each from the AER and AEMO.

The responses from the consumers, the AER and AEMO all throw some doubt as to whether the draft rule would achieve the outcomes sought by the proposed rule from the AER. For the AEMC to state that there was general support for the draft rule is not correct, unless the AEMC considers that the volume of submissions from the generators is balanced against the volume of submissions from other respondents.

The AEMC is tasked with applying, as a test to any rule change proposal, the National Electricity Objective which is cast in the form of the need to address the long term interests of consumers; it is not cast to be in the long term interests of generators!

The proposed rule from the AER was to address a number of very concerning issues where some generators have acted to the detriment of the smooth running of the electricity market but particularly to the detriment of consumers. The ability of some generators to use their market power to enhance their earnings at the expense of consumers has been raised a number of times with the AEMC (notably the rule changes proposed by the MEU, AER and SA government) yet consistently the AEMC appears to be less supportive of the interests of the market and consumers and more supportive of the commercial interests of the market's supply side.

The MEU notes that one of the AER examples provided highlighting the use of ramp rates to advantage some generators was the constraint on the Gladstone-Callide transmission line where generators used the congestion on that line coupled to their ability to vary ramp rates to cause considerable harm to

consumers. The MEU is aware that this specific example has been addressed by augmentation of the transmission line but this resolution has come at some considerable expense to consumers who are now required to pay considerable additional costs to alleviate the problem. The MEU is not convinced that this was the most efficient outcome for consumers.

In this rule change process, the reason for the AEMC appearing to be more supportive of the generator's views is based on the assumption that imposing a more stringent requirement on generators could impact future investment decisions made by intending generators. What concerns the MEU is that the AEMC has not investigated whether a rule requiring higher ramp rates to be offered would in fact have significant impact on a generator's future investment - it has merely accepted that this would be the case based on a theoretical assessment. The MEU provided views in its earlier submissions that the selection of ramp rates is only one of many factors that influence a decision to invest in generation, yet the AEMC has ignored this observation and persisted with its theoretical view without assessing the degree to which a market requirement for a specific minimum ramp rate would influence an investment decision.

In particular, the AEMC has highlighted the concerns of coal fired generators about imposing higher ramp rates as they consider that they would have trouble in complying with this requirement. The MEU considers their observation is valid but points out that the rule can provide for the AER to grant exemptions which would exclude those generators from having to comply and/or having lower ramp rates to comply with. This overcomes those generator's real concerns but still imposes controls which would prevent the exercise of market power that the AER has identified.

The AEMC has consistently maintained that the ramp rates offered by generators are commercial decisions for each generator. The implication of this observation is that the AEMC supports the concept that some generators should be able to use their market power in regard to ramp rates to set prices which advantage those generators, cause harm to other generators and retailers and increase prices to consumers.

The MEU remains extremely concerned that the AEMC analysis is cursory, lacks the rigour of sensitivity analysis and fails to address the basic concerns the AER has raised and which led to its decision to seek a rule change.

2. The AEMC Options

As a result of the concerns raised in responses to the AEMC preferred draft rule, the AEMC has proposed two additional options to address the AER concerns - these two options would apparently be in addition to the AER proposed rule and the AEMC preferred draft rule.

Option 1 refines the preferred draft rule option but caps the requirement for maximum ramp rates

In contrast option2 refines the existing arrangements by applying the same requirement to each generation unit and removes the ability to reduce ramp rate requirements through aggregation.

The prime drivers of the AEMC decision making process are that under the current rule:

1. The rules should be technology indifferent.

2. Generators with less capacity than 100 MW carried a greater burden for addressing ramp rate needs than generators over 100 MW.

3. Generators which are aggregated have a benefit.

The MEU agrees that change is necessary to the rules as it has been demonstrated that the current rules allow distortions to occur that are not in the long term interests of consumers.

2.1 The MEU considerations

To assist the MEU consider the options, it provides the following observations about the drivers that the AEMC has used to assess the proposed rule change. The MEU also asks the question about why the AEMC has not examined other options.

2.1.1 Technology indifference

While the MEU agrees in principle that the rules should attempt to be technology indifferent, it is also very concerned that, in an attempt to be technology indifferent, the outcome will result in the application of the lowest common denominator.

This is most apparent in the responses to the AEMC preferred draft rule where the observations are made about the low ramp rates that coal fired

(particularly brown coal fired) generators have which is a direct result of the selection of the fuel used. Despite this, there have been some coal fired generators where they have been able to exceed the minimums included in the current rule.

The AEMC approach is about setting ramp rates that allow the generators with the lowest ramp rates to comply. But in doing this, it is consigning consumers to carry the burden of outcomes that are driven by the exercise of market power by other generators. This aspect is not discussed or evaluated at all in the AEMC discussion which focuses purely on the commercial interests of generators and what might occur in terms of future investment if the rules differentiate between technologies.

The MEU considers that applying lowest common denominator is not in the interests of consumers as there are other tools available to address the concerns of technologically driven low ramp rate generation. The most obvious of these is to allow a generator to seek exemption from the defined ramp rate and to be granted a lower ramp rate dependent on its technology. This approach to exemptions to comply with the rules is already available for some generators and the MEU cannot see why exemption is not made available in this instance.

To gain an exemption and adjusted ramp rate would require application to the AER and substantiation for the need to be exempt. If this option was available, then investment in future generation would not be compromised but would still ensure that there is sufficient generation available which does have the requisite ramp rates to meet the system needs.

2.1.2 The needs of the market

A major failing of the AEMC analysis is that it only focuses on what ramp rates might be achieved from the existing fleet of generators and whether imposing higher ramp rates might impact future investment.

This approach totally eliminates from discussion as to what the needs of the market might be in the future and what type of generation investment might be needed to manage the market as it changes with time. The AEMC fails to assess the future needs and that the market will most probably need future investment in high ramp rate plant to accommodate the increasing amount of intermittent generation (wind and solar) that is already being seen in the NEM.

For example, it has already been identified that in South Australia with its very large fleet of wind generation and high penetration of rooftop solar

generation, there is already a need for high ramp rate generation to manage the demand fluctuations that are occurring.

Setting a requirement for higher ramp rate generation is an essential aspect for the market in the future. The MEU made particular note of this issue in its response to the preferred draft rule but the AEMC made no effort to address this observation in its Options Paper.

2.1.3 Generators of less than 100 MW carry more burden

Whilst it is true that smaller generators under the present rule do carry more of the burden for providing higher ramp rates, the MEU points out that in reality, almost all generators with less than 100 MW capacity are gas turbines or hydro stations which innately have the ability to easily provide high ramp rates than coal fired generators which have lower ramp rates due to their structure and fuel type, and almost universally economics drives coal fired generators to be much larger than 100 MW.

Additionally, the MEU points out that some high ramp rate generation units are significantly larger than 100 MW (eg some gas turbines and a number of hydro plants) and therefore separation by capacity is quite arbitrary and to a large extent misleading. To effectively limit the ramp rates for high ramp rate generators with >100 MW capacity does not reflect their technical abilities and allows them to exercise market power because the rules are being set based on what large coal fired generators can achieve.

The MEU questions why a gas turbine or hydro generator with a capacity of less than 100 MW should be treated differently under options 1 and 2 to one with a capacity greater than 100 MW - it just doesn’t make sense.

In contrast, the AER proposal makes it clear there would not be such an arbitrary and artificial differentiation.

2.1.4 Aggregation

Under the existing rule the AEMC points out there is an implicit inconsistency between generators that are aggregated compared to those that were not aggregated which placed a larger burden on stand alone generators compared to aggregated generation units. The MEU agrees with this observation, in that it is the structure and fuel type of each generation unit that sets the ramp rates available, rather than whether they were aggregated with other generation units.

The MEU also notes that aggregated generators advise their bid patterns are based on their "fleet" of generation units rather than bidding via

individual units and that setting ramp rates on a unit basis is not consistent with their "fleet" bidding approach.

The MEU points out that the ramp rates that can be achieved are related to each unit in the "fleet" and the aggregated generator should to build this into its bidding pattern rather than seeking a benefit through being able to implement an effective lower ramp rate than equivalent generators which are not aggregated.

The MEU agrees that differentiating between stand alone and aggregated generation is not efficient and allows "fleet" owners to have a benefit not available stand alone generators.

2.1.5 Why persist with 3 MW/min, 3%/min or 1%/min

What is also very concerning to the MEU is that the AEMC in its draft rule and again in the options 1 and 2, is persisting only with assessing ramp rates which are either related to 1% of capacity/minute and/or 3 MW/minute (preferred draft rule and option 1) or 3% capacity/min and 3 MW/min (option 2). There is no attempt to explain why these values are the only ones that should be utilised - what is so critical about these values that these have to be used in any actual rule? Neither the preferred draft rule nor the Options Paper explains why the AEMC has persisted in only using these values.

Other than some coal fired generators which might have difficulty in complying with these ramp rates, there is little discussion whether these values could be higher or lower and what the outcomes would be if different values were used. The failure to carry out any sensitivity testing on alternative values is a major shortcoming of the AEMC analysis, as is the lack of any discussion as to whether the inability of some generators to comply with the ramp rates could be addressed differently.

2.2 The options

The MEU considers that the AEMC assessment approach results in consumers having to identify a least worst option between these two new options, the existing rule and the AEMC preferred draft rule option.

As the MEU has previously advised, it considers that there are other options available that better meet the NEO and these have been detailed in the MEU submission and in others such as by PIAC which has also provided its view on different option. What is concerning to the MEU is that the AEMC has not attempted to explain why it has not considered these as part of its Options Paper but concentrated on its views of how the AER proposal and the AEMC preferred

draft rule do not meet the needs of coal fired generators. If the AEMC seeks input, it has an obligation to explain why other options proposed are not being considered.

2.2.1 The MEU preferred option

In its response to the preferred draft rule, the MEU proposed an option which it considers meets almost of the concerns that have been raised by the AER, the generators and consumers. The MEU approach readily incorporates recommendation 3 included by PIAC in its response to the preferred draft rule.

As AEMC has decided to develop its own options the MEU can only conclude that its and the PIAC option have been rejected out of hand by the AEMC.

2.2.2 A different approach

The MEU considers that the AEMC should have explored in more depth the option for assessing what the NEM requires as a ramp rate to maintain security without AEMO implementing its powers to constrain on/off generation to maintain security.

In the absence of such investigation, the AEMC is merely perpetuating market rules based on what has been done in the past rather than what will be needed in the future.

The rules should be set based on the needs of the market with higher ramp rates being implemented as required but providing the ability to gain an exemption from the higher ramp rate with the AER being permitted to set lower minimum ramp rates for such non-compliant generation.

As a part of this option, the settings for higher ramp rates (eg 1.5 or 2% of maximum capacity/minute or 5-7 MW/min) should/could be evaluated.

2.2.3 The AER proposal

The MEU still considers that the AER approach to the issue has more merit than the AEMC preferred draft option and the two new options as it is a pragmatic approach to the issue and recognises that the outturn ramp rate is more a function of other aspects that are considered as part of assessing future investment in generation.

2.2.4 The AEMC options

The MEU considers that the three approaches outlined above provide better outcomes for consumers than any of the options proposed by the AEMC. With this proviso, the MEU has attempted to identify which is the least worst of the AEMC options.

Table 3.1 in the Options Paper provides a clear indication of which of the three AEMC options would best meet the needs of consumers. This table highlights that option 2 seems to provide a net improvement in aggregate ramp rate capability for every region whereas the other AEMC options result in reductions in aggregate ramp rates in some regions; a reduction in aggregate ramp rate from the current levels is clearly not in the interests of consumers.

In particular, as the MEU notes above in its example of South Australia region, the high level of intermittent generation in that region requires significant ramp rate capability. To propose a rule change which reduces the aggregate ramp rate in that region would cause considerable harm to consumers in SA.

Analysing option 2 against the key criteria noted in section 2.1 above indicates that there is unlikely to be a detriment to consumers from its implementation and a marginal benefit resulting.

On this basis, the MEU considers that AEMC option 2 is the least worst of the AEMC options but that there are better options that have not been assessed.