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John Pierce  
Chairman  
Australian Energy Market Commission  
PO Box A2449  
SYDNEY SOUTH NSW 1235

Dear Mr Pierce

**Submission on National Electricity Amendment – Generator ramp rates and dispatch inflexibility in bidding**

Please find attached the AER's submission regarding the AEMC's February 2014 consultation paper.

As the proponent, we welcome the opportunity to comment at this early stage of the consultation process on what we consider to be an important rule change proposal. This submission reiterates how the AER would monitor compliance with the requirement for participants to offer ramp rates and fast start inflexibility profiles (FSIPs) at the maximum level their plant is capable of achieving at the time.

It is important to note that participants are aware of their generator ramp rate capabilities based on the conditions of their plant. The Electricity Rules already require generators to provide the maximum ramp rate they can safely attain at the time when they offer a ramp rate below 3 MW/min (and the rebid reason must contain a technical reason). This rule change proposal seeks to extend this to require generators to always offer the maximum ramp rate they can safely attain.

Our rule change proposal acknowledges that there is a range of ramp rates at which a generator may decide to operate, each possibly with varying degrees of cost. As discussed in our submission, we think the most appropriate way for generators to control these costs should be contained in the commercial aspects of an offer – that is, rebidding volumes within price bands.

A benefit of this rule change proposal is that it seeks to improve consistency in the Electricity Rules. Importantly, this rule change proposal would lead to an equal treatment of all technical (versus commercial) aspects of an offer. This submission also brings to light the inconsistencies associated

with schedule 3.1 of the Electricity Rules, which could be amended as part of this rule change proposal. The AER considers that improving consistency will have flow-on benefits such as simpler enforcement, more efficient dispatch and reduced risk.

The AER would be pleased to provide further assistance to the Commission on this important area of work. If you would like to discuss any aspect of this submission please contact Tom Leuner, General Manager, Wholesale Markets, on (03) 9290 1890.

Yours sincerely



Andrew Reeves  
Chairman  
Australian Energy Regulator

## **Introduction**

As an introductory comment, the AER recognises that although our rule change proposal won't address all of the costs associated with disorderly bidding and its consequences, it will reduce the likelihood and duration of such market outcomes, while improving the efficiency of the operation of the market more generally.

This submission offers further insight into the AER's proposed approach to monitoring and enforcing compliance with the proposed rule change. It also addresses some of the points raised by the AEMC in its consultation paper.

## **Approach to monitoring and enforcement**

The AER flagged its intended approach to monitoring compliance with the proposed provision in its rule change request (in the section entitled *AER's proposed approach to compliance*).

The AER appreciates that the conditions and circumstances that can influence the rate at which a participant can be ramped vary, often quite dynamically, particularly as generators are moving through different operating ranges. We are also aware, that given a set of forecast conditions a generator can predict, with reasonable certainty, what the ramping capability of the generator will be at that level of output.

This proposed rule change would require participants to bid a ramp rate that reflected its reasonable expectation of the plant's operating mode throughout the forecast period. As more information came to hand the ramp rate would be refined.

In terms of monitoring compliance with this proposed rule change, it is not our intention to scrutinise small differences between ramp rates offered by participants and some historical benchmark, nor do we expect to analyse in detail when a participant's ramp rate is moving through a range of values, consistent with movements in output. Rather, we would use our extensive monitoring knowledge and 15 years of historical generator data to examine ramp rates that materially deviate from expected levels where market conditions create financial incentives to reduce the ramp rate below the unit's maximum technical capability. For example, if a constraint is binding on a participant and their ramp rate is bid down from a high level to a very low level. As is the case under the current rules (where we investigate ramp rates below 3 MW or 3 per cent), we would, in the first instance, seek further information from participants to understand the circumstances surrounding ramp rates that appear anomalous or when we require further clarity on the technical reasons provided.

The AER's approach to monitoring compliance with the proposed rule changes would be included in amendments to our existing *Rebidding and Technical Parameters Guideline*. Participants would be invited to comment on the proposed approach throughout the guideline consultation process.

## **Technical versus Maximum ramp rates under Schedule 3.1**

The consultation paper states that the rule change request is unclear on whether the ramp rate submitted by generators under schedule 3.1 of the Electricity Rules would constitute a generator's default ramp rate or whether some other method of determining ramp rates should apply.

This comment raises the important issue of the distinction between the maximum ramp rate submitted in accordance with schedule 3.1 and the maximum ramp rate a generator is technically capable of achieving at a point in time.

Under the Electricity Rules, maximum ramp rate is defined as:

*The maximum ramp rate that an item of equipment is capable of achieving in normal circumstances. This may be:*

*(a) as specified by the manufacturer; or*

*(b) as independently certified from time to time to reflect changes in the physical capabilities of the equipment.*

Schedule 3.1(a) indicates that schedule 3.1 data is only to be used for verification and compilation (i.e. validation) of dispatch bids and offers in the trading day schedule. The intention of the provision is to validate or filter out incorrect inputs used as part of an offer as early as possible. AEMO uses the values provided by participants in schedule 3.1 to identify spurious bid data (for example ramp rates in excess of the maximum specified by the manufacturer). In other words, it is not a regulatory provision, but rather a tool for validation.

The AER understands that, as it is currently drafted, the definition of maximum ramp rate (in the Glossary to the Electricity Rules) is causing confusion among some participants. Rather than submitting the maximum ramp rate the unit is capable of achieving, some participants submit ramp rates achieved under normal circumstances.

Rather than submitting the maximum ramp rate as defined in the Electricity Rules, the AER's expectation in this Rule change proposal would be for generators to submit ramp rates that reflect the maximum achievable under the conditions at the time, or expected output of plant under anticipated conditions in the forecasting horizons. Indeed, as stated in our rule change proposal:

*The AER recognises that when submitting offers, bids or rebids for a future timeframe (i.e. in the pre-dispatch timeframe), it may be difficult for generators to precisely determine the maximum ramp rate at that future point in time. In this case the AER would expect participants to submit ramp rates that are typical of what the generator could achieve based on the forecast conditions. However, the AER would expect that closer to the dispatch timeframe participants would be more aware of the maximum capability of their plant and that their offered ramp rate should be refined to reflect this.*

This approach negates the need to define a "technical" ramp rate. Under the proposed rule, the ramp rate offered by the generator would be the best the generator would be capable of achieving at the time, given the information available at the time of making the offer. Based on the conditions of their plant, participants should be aware of their generator's ramp rate capabilities at any point in time.

For the reasons discussed above and in answer to a point raised in the consultation paper, it would not be appropriate to use the ramp rate submitted in accordance with Schedule 3.1 as a default ramp rate.

## Ramp rates - technical versus commercial parameter

The consultation paper states:

*In determining the ramp rates to apply to each of their generating units, generators currently take into account the costs associated with wear and tear and the risks of damage to plant. Therefore, each generator is likely to have a range of ramp rates that they consider to be typical of the technical capability of their generating units to which a range of costs may apply. As such, there is a trade-off that exists between the ramp rate capability provided and the costs to the generating unit. Therefore, the determination of ramp rates may not be a purely technical exercise as characterised by the AER.*

The AER considers the appropriate way for generators to control the costs associated with their plant operation (including the cost of the ramp rate) should be contained in the commercial aspects of an offer – that is, rebidding volumes within price bands. For example, generators could bid themselves into high price bands to avoid dispatch, or offer lower volumes, etc.

The AER acknowledges that there is a range of ramp rates at which a generator may decide to operate, each possibly with varying degrees of cost. However, we do not consider it appropriate for generators to rebid ramp rates as a way to manage exposure to market outcomes, particularly when the market systems treat these parameters as hard physical limitations. Indeed, as was made clear in our rule change proposal, we consider ramp rates (and FSIPs) were always intended to be a technical characteristic of an offer and therefore the determination of ramp rates by generators should be a purely technical consideration. As discussed in the rule change proposal, the constraint violation penalties attributed to both ramp rate and FSIP constraints indicate that they are considered to be high priority constraints, suggesting that the dispatch process treats them as if they reflect the technical characteristics of plant.

Ramp rates lower than the technical capability of the plant increase the cost of operation of the NEM unnecessarily when other parameters in generator offers can be utilised to more effectively represent costs. The rule change proposal seeks to bring ramp rates and FSIPs into line with the other technical characteristics of an offer (i.e. those related to ancillary services or when a generator declares itself inflexible and is unable to follow dispatch instructions).