

2 December 2008



Mr John Tamblyn  
Chairman  
Australian Energy Market Commission  
Level 5, 201 Elizabeth Street  
Sydney NSW 2000

Dear Mr Tamblyn

### **Ramp Rates, Market Ancillary Service Offers, and Dispatch Inflexibility Draft Rule**

Delta Electricity (Delta) appreciated the AEMC's consideration of the implications for aging thermal plant from setting minimum and maximum ramp rates. The conclusion reached by the AEMC that the proposed Rule provides sufficient scope for establishing optimal ramp rates for aging plant under normal operating conditions is still contested by Delta. This view is supported by legal advice sought from Middletons legal firm, a copy of which is attached to this submission.

Delta maintains the Rule;

1. does not adequately account for optimal operations of aging plant with technical ramp rate capability above 3MW/min; and
2. will result in some generators removing themselves from price setting by bidding into higher priced bands.

Based on the advice received from Middletons, Delta requests a modification to the Rule to explicitly recognise the normal operating ramp rates of aging thermal plant.

Under the new "maximum ramp rate" definition a generator must declare its physical capability which in the case of most coal fired thermal plant exceeds 3MW/min. Given that a ramp rate lower than 3MW/min is only allowed for safety reasons or when plant is physically prevented from achieving 3MW/min some older plant will have to offer the 3MW/min ramp rates at all times. In order to minimise maintenance costs over remaining asset life some generators will bid volume into higher price bands to reduce loading variations. Bidding in this manner will effectively remove the unit from price setting and reduce competition.

Middletons conclude that the lower ramp rate requirements and the definition of maximum ramp rate will not provide sufficient flexibility to address Delta's concerns, contrary to the view expressed by the AEMC. The following change to the Rule 3.8.3A(c) is proposed (changes are shown in blue font);



"a *Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies may provide a ramp rate to NEMMCO that is less than that specified in clause 3.8.3A(b)(i) if the *ramp rate* is affected by an event, or other occurrence (or by the age or physical condition of the *relevant generating unit, scheduled load or scheduled network service* or its operating conditions) that:

1. physically prevents the *relevant generating unit, scheduled load or scheduled network service* from attaining a *ramp rate* of at least that specified in clause 3.8.3A(b)1; or
2. makes it unsafe for the *relevant generating unit, scheduled load or scheduled network service* to operate at a *ramp rate* of at least that specified in clause 3.8.3A(b)1; or
3. would result in undue deterioration of the condition of the *relevant generating unit, scheduled load or scheduled network service*, or otherwise prejudice its continuing efficient operation, when operating at a *ramp rate* of at least that specified in clause 3.8.3A(b)1,

for the period of time in which the ramp rate is effected by that event or other occurrence (or by that age or physical condition).

A consequential amendment would also be needed to clause 3.8.3A(d) as follows:

"Where a *Scheduled Generator* or *Market Participant* to which this clause 3.8.3A(c)(1) or (2) applies provides a ramp rate that is less than that specified in clause 3.8.3A(b)(1), it must provide a ramp rate to NEMMCO that is the maximum the *relevant generating unit, scheduled load or scheduled network service* can safely attain at that time."

Delta acknowledges that it would be difficult to provide an unambiguous definition of aging plant. However, the proposed changes are consistent with the intent of the proposed Rule that requires generators to reflect plant capability.

As stated in Delta's first submission, system security will not be compromised by a small number of generating units operating below 3MW/min. The 3MW/min minimum ramp rate was arbitrarily determined without clear demonstration of a correlation between system security violations and the 3MW/min setting. Apart from rare extreme constraint conditions there is no evidence that low ramp ramps of a small number of generators is affecting system security.

Delta respectfully requests the AEMC reconsider its position on the impact of the Rule on aging plant and give due consideration to the amendment drafted by Middletons.

For further information please do not hesitate to contact Mr. Tony Callan, Manager Market Operations, on (02) 9285 2712.

Yours faithfully

Tim Baker  
General Manager/Marketing

2 December 2008

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**By Email: tony.callan@de.com.au**  
Tony Callan  
Delta Electricity

Dear Tony

## Proposed Rule Change – Ramp Rates

You have requested our advice on the AEMC's draft Rule Determination *National Electricity Amendment (Ramp Rates Market Ancillary Service Offers, and Dispatch Inflexibility) Rule 2008*.

Among other things, the Rule effectively proposes to set a minimum ramp rate of 3MW/minute. You have also requested a draft amendment to the Rule that allows Delta to offer a lower ramp rate that is less than 3MW/minute under the direction of NEMMCO, for example during extreme market conditions.

### 1. Background

The proposed Rule change has been through a first round of submissions and the second round of submissions closes on 5 December 2008. Delta's submission during the first round explained that to minimise additional stresses on plant from ramping, generators generally ramp their plant at a rate well below the plant's technical capability. For aging plants such as Munmorah power station, Delta often sets a ramp rate of less than 3MW/minute under normal operating conditions to deliver the lowest operating cost over the remaining life of the plant.

Delta considered that the proposed Rule change would not achieve the national electricity objective because forcing mid-merit plant to ramp at at least 3MW/minute may result in some mid-merit plant removing themselves from price setting by bidding into higher priced bid bands.

The AEMC rejected Delta's submission, stating, "*the Commission is of the view that the proposed Rule provides sufficient scope for establishing optimal ramp rates for aging plant under normal operating conditions*". It is not clear from this whether the AEMC considered that the proposed Rule was sufficiently flexible to address Delta's concerns, or whether the AEMC does not necessarily accept them.

### 2. Executive Summary

We consider that the proposed Rule as currently drafted is not sufficiently flexible to address Delta's concerns described above. Part 5 of this Advice recommends an amendment to achieve this flexibility and ensure that the proposed Rule contributes to achieving the national electricity objective.

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**3. Is the proposed Rule flexible enough to address Delta's concerns?**

**(a) Requirements of proposed rule 3.8.3A**

Clause 3.8.3A(b)(1) requires generators and market participants to provide ramp rates that are at least 3MW/minute, and no more than the "maximum ramp rate" (discussed later) for that item of equipment.

While some flexibility is contained in 3.8.3A(c), clause 3.8.3A(d) further requires any lower ramp rate provided under clause 3.8.3A(c) to be the maximum that can be safely attained at that time.

**(b) Does the ability to nominate a lower ramp rate in clause 3.8.3A(c) assist Delta?**

Clause 3.8.3A(c) will allow a lower ramp rate to be provided:

"...if the ramp rate is affected by an event or other occurrence that:

1. physically prevents the *relevant generating unit, scheduled load or scheduled network service* from attaining a *ramp rate* of at least that specified in clause 3.8.3A(b)1; or
2. makes it unsafe for the *relevant generating unit, scheduled load or scheduled network service* to operate at a *ramp rate* of at least that specified in clause 3.8.3A(b)1,

for the period of time in which the ramp rate is effected by that event or other occurrence."

In our view, clause 3.8.3A(c) will not assist Delta as it only allows a ramp rate lower than 3MW/minute for safety reasons or because plant is physically prevented from attaining the usual ramp rate.

In contrast, as we understand it, Delta's request for lower ramp rates is due to concerns about operational efficiency – specifically, the potential deterioration of ageing plant that would result from ramping at the higher rate. As this is an operational, rather than a physical or safety concern (albeit with wider ramifications), it falls outside the reasons specified in clause 3.8.3A(c).

**(c) Does the definition of "maximum ramp rate" assist Delta?**

The proposed Rule introduces a new defined term "maximum ramp rate", meaning:

"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."

The ramp rate offered under Clause 3.8.3A(b)(1) must not exceed the "maximum ramp rate" that applies to that item of equipment. However, the proposed definition does not assist Delta as it contemplates an operating upper limit (which in the case of Munmorah is 5MW/minute),

rather than a rate that is most efficient in the long term (which in the case of Munmorah would be less than 3MW/minute).

The "maximum ramp rate" is intended to be the upper operating limit that an item is *capable* of achieving in normal circumstances. (Clause 3.8.3A(b)(2) states that it may not be exceeded.) It is not intended to mean an item of plant's most efficient, sustainable or BAU rate. We query whether NEMMCO intended aged or mid merit plant to be operating at its upper operating limit at all times, but this is what is achieved by the proposed new definition.

Therefore, it seems to us that the AEMC's proposed new definition is not sufficiently flexible to address Delta's concerns.

#### 4. Suggested amendment to proposed Rule

Given our conclusion that the proposed Rule does not respond to Delta's situation at Munmorah, we consider that an amendment is needed to address Delta's concerns. We suggest the following amendment to subclause 3.8.3A(c) (in track changes font):

"a *Scheduled Generator* or *Market Participant* to which this clause 3.8.3A applies may provide a ramp rate to NEMMCO that is less than that specified in clause 3.8.3A(b)(i) if the *ramp rate* is affected by an event, ~~or~~ other occurrence (or by the age or physical condition of the *relevant generating unit, scheduled load or scheduled network service* or its operating conditions) that:

1. physically prevents the *relevant generating unit, scheduled load or scheduled network service* from attaining a *ramp rate* of at least that specified in clause 3.8.3A(b)1; ~~or~~
2. makes it unsafe for the *relevant generating unit, scheduled load or scheduled network service* to operate at a *ramp rate* of at least that specified in clause 3.8.3A(b)1; or
3. would result in undue deterioration of the condition of the *relevant generating unit, scheduled load or scheduled network service*, or otherwise prejudice its continuing efficient operation, when operating at a *ramp rate* of at least that specified in clause 3.8.3A(b)1,

for the period of time in which the ramp rate is effected by that event or other occurrence (or by that age or physical condition)."

A consequential amendment would also be needed to clause 3.8.3A(d) as follows:

"Where a *Scheduled Generator* or *Market Participant* to which this clause 3.8.3A(c)(1) or (2) applies provides a ramp rate that is less than that specified in clause 3.8.3A(b)(1), it must provide a ramp rate to NEMMCO that is the maximum the *relevant generating unit, scheduled load or scheduled network service* can safely attain at that time."

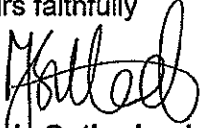
(This consequential amendment would necessary because subclause (3) intends to allow a lower ramp rate to be offered for efficiency reasons associated with physical plant conditions, even if a higher rate can be safely attained.)

In our view, amending clause 3.8.3A(c) is an appropriate place to add the flexibility needed to address Delta's concerns, as the clause already provides a mechanism for offering lower ramp rates for physical and safety reasons.

Secondly, it avoids the AER's prior concerns about how to ensure consistency and transparency if NEMMCO's prior approval for lower ramp rates was required to be obtained. The proposed amendment to clause 3.8.3A(c) does not raise these issues as it relies on the same procedural checks that would apply to clause 3.8.3A(c)(1) and (2).

Please feel free to contact me if you would like to discuss this advice further.

Yours faithfully

A handwritten signature in black ink, appearing to read 'Nicola Sutherland', written over a faint, illegible background.

**Nicola Sutherland**  
**Senior Associate**