grid australia
BACKBONE OF THE NEM

20 September 2012

Mr John Pierce
Chairman
Australian Energy Market Commission
PO Box A2449
Sydney South NSW 1235

Via website: www.aemc.gov.au

Dear John

Grid Australia Response to 'Changes to normal voltage Rule' change Proposal (ERC0148)

Grid Australia welcomes the opportunity to respond to the Australian Energy Market Commission's (AEMC) consultation on International Power's National Electricity Rule (the Rule) change proposal on 'changes to normal voltage'. This submission focuses upon the issues our members consider are most pertinent to electricity transmission businesses and is not intended to be a complete response to all the issues raised in the AEMC's Consultation Paper on changes to normal voltage dated 23 August 2012.

The Rule change proposal seeks to amend the definition of normal voltage to require, in the event of a change to normal voltage[1], that a Transmission Network Service Provider (TNSP) conduct a process of consultation in accordance with clause 5.3 of the Rules.

While Grid Australia has no objection to the intended outcome of the proposed Rule change, its members do not presently envisage changing normal voltage levels and consider:

- The scope of the problem is limited to specific circumstances and the likelihood of a change in normal voltage is very rare. As described in the AEMC's consultation paper, the only change to normal voltage that has occurred in the NEM arose because of very rare circumstances (at George Town in Tasmania). Of the two instances in which the normal voltage has been changed, the first was to reduce a potential constraint; the second (which reversed the first change) was to alleviate a perceived barrier to entry. These two instances should not be taken as representative of any general practice.

- Given the limited scope of the problem, a formal consultation process would add little value to the existing Rules.

[1] Grid Australia understands that across the NEM, normal voltage is equal to the nominal voltage.

- With respect to this proposal, Grid Australia considers the definition proposed by International Power does not necessarily effect its desired outcome because clause 5.3 could be interpreted to be largely limited to imposing consultation requirements with respect to connection enquiries and applications to connect.

Grid Australia has provided in Attachment 1 to this submission, responses to a number of the questions contained in the AEMC's Consultation Paper.

Should you wish to discuss any aspect of this particular submission, please contact, in the first instance, Mr Paul Rayner via e-mail: Paul.Rayner@transend.com.au or on (03) 6274 3689, or myself via email: korte.rainer@electranet.com.au or on (08) 8404 7983.

Yours sincerely

Rainer Korte
Chairman
Grid Australia Regulatory Managers Group

Attachment 1

Grid Australia responses to Question Set 1: 'Scope of the problem'

1.1 What are some of the potential triggers that give rise to a change in the normal voltage level?

As described in the AEMC's Consultation Paper the only change to normal voltage that has occurred in the NEM arose because of very rare circumstances. Of the two instances in which the normal voltage has been changed, the first was to reduce a potential constraint; the second (which reversed the first change) was to alleviate a perceived barrier to entry. These two instances should not be taken as representative of any general practice.

1.2. In the absence of consultation:

(b) Could a change to the normal voltage level cause existing market participants to exit the market? Could it create barriers to entry for new entrants?

Based on the requirements in the Rules, a change to normal voltage ultimately could only occur if the change had no adverse impact on existing network users and should therefore not cause a market participant to exit the market.

There are potential scenarios in which a change to normal voltage could result in an effective barrier to entry. For example, if normal voltage is 10% higher than nominal voltage, and the minimum access standard of S5.2.5.4 requires a generating system/unit to remain in continuous uninterrupted operation for voltage disturbances which may be up to 10% higher than normal voltage (noting that no time limit is specified), this effectively requires a generating system/unit to be able to operate at voltages up to 121% (= 1.1 x 1.1) of nominal voltage for an indefinite period. This could be an unintended barrier to entry for some generation technologies.

(c) Are there likely to be impacts to system reliability and security if the normal voltage level is changed?

Before any change to an access standard, the TNSP would undertake extensive investigations to assess the impact of the proposed change. The Australian Energy Market Operator (AEMO) is responsible for system security and would be involved in this analysis. Therefore, a change to normal voltage would not be made if there was a resulting adverse impact on system reliability and system security.

1.3. How often is the normal voltage level likely to be changed?

Grid Australia does not presently envisage changing normal voltage levels and therefore considers the likelihood of a change to normal voltage to be very rare.

1.4. How would a change to the normal voltage level impact the following parties?

a) Generators

b) New entrants

c) AEMO

d) Large users

e) NSPs

f) Broader market?

A change to the normal voltage level will lead to additional costs, which will likely be borne by the electricity market as outlined below. There is no mechanism to determine the entity responsible for the costs associated with activities arising out of changes to normal voltage.

- Engineering studies are required to determine the level of elevated voltages experienced by all parties connected to a meshed network because any elevated voltage at a particular point (which is essentially what happens when a higher level of normal voltage is allowed to occur) has impacts on other parties whose connection points are electrically close.

- There may be a need for an assets replacement program at the affected connection points because existing assets are unable to withstand transient voltages associated with an increased normal voltage – refer to Figure 2.1 of the Consultation paper published by the AEMC.

- Continuous operation at voltage levels for which assets are not designed could lead to accelerated ageing of assets of some industry participants.

1.5. Do connected parties/connection applicants have provisions in their connection agreements that obligate NSPs to notify them of any planned changes to the normal voltage level? If not, is this likely to require changes to connection agreements?

Based on Schedule 5.6 of the Rules, connection agreements must contain specific conditions that have been agreed to for connection and access to the transmission network. Chapter 5 sets out a clear process for the variation of a specific condition in a connection agreement.

1.6. Do NSPs consult informally with affected parties in the event that the normal voltage level needs to be changed? If so, how widely do they consult? Do NSPs use the provisions contained within clause 5.3 of the NER as a guide?

To date, Transend Networks is the only TNSP to make a change to normal voltage. Informal consultations with affected network users were conducted before seeking approval from AEMO to make the change.

1.8. Would consultation requirements: (a) provide benefits to connected parties, and if so, what would be the nature and value of these benefits? (b) create material time delays to process new connections? (c) improve system reliability and security relative to the current arrangements?

TNSPs have never processed a connection application with a view to having a non-standard normal voltage. In general, given the potential for a non-standard normal voltage to create an unintended barrier to entry to future connection applicant(s) it would appear inappropriate to do so.

In response to part (c), the imposition of consultation requirements is unrelated to and would have no effect in improving system reliability and system security relative to the current arrangements. The Rules clearly set out the responsibilities of TNSPs and AEMO in relation to system reliability and system security.

Grid Australia responses to Question Set 2: 'Assessment of proposed solution'

2.1. Given the current industry practice, is there a need for a formal consultation process within the Rules?

Grid Australia considers the existing Rules provide adequate guidance and a formal consultation process would add little value given the very rare likelihood of a change to normal voltage.

2.3. If additional consultation is required, who should NSPs have to consult with and what should be the timeframe for this consultation?

It would be reasonable for TNSPs to consult with all parties who have connected equipment at the location for which normal voltage is proposed to be changed.

2.4. If additional consultation is required, do NSPs and AEMO need additional guidance on what factors they should consider in deciding whether changes to normal voltage should be made and the timing for the approval of changes to normal voltage?

Grid Australia considers the obligations on TNSPs mandated by the Rules provides adequate guidance.

2.5. Do stakeholders have views on any alternative solutions which could be used instead of clause 5.3 of the NER?

In examining any alternative solutions, Grid Australia would caution that the potential for the overall costs to the NEM arising out of a change to normal voltage is likely to be significantly greater than any benefits. Any alternative options should be assessed in line with the National Electricity Objective.