

A few  
words.

**Elizabeth Walters**  
**Assistant Director Electricity**  
**Economic Regulation Authority**  
**Level 6, 197 St Georges Terrace**  
**Perth WA 6000**  
**23 November 2011**



Dear Elizabeth,

AGL Energy welcomes the opportunity to comment on the Economic Regulation Authority's (ERA) proposed amendments to *Western Power's Technical Rules* (Technical Rules).

AGL Energy (AGL) is Australia's largest private owner, operator and developer of renewable generation and has invested well over \$2 billion in renewable energy with further development opportunities under consideration in its portfolio. AGL operates across the supply chain and has investments in coal-fired, gas-fired, embedded electricity generation and electricity retailing. AGL has over 3 million retail customers and operational control of some 3,000MW of generation capacity in the National Electricity Market.

AGL considers the review undertaken by ERA on the Technical Rules as a progressive step that would ensure relevant technological advances can be incorporated in the future planning, processes and procedures of the network construction and operation. AGL believes the review is thorough and comprehensive, and is generally supportive of the proposed revisions of Technical Rules.

AGL's comments on the Technical Rules relate to the temporary over-voltage ride-through requirements with respect to Figure 2.2.1 of the report. The review report suggest that there is a:

*"...clear case of Western Power's Rules having a much higher requirement than that found in the National Electricity Market (NEM) Rules."*

and that the Figure 2.21 limits

*"...potentially posed a barrier to entry for Renewable Energy Generators that had electronic inverters as these may not be able to meet the requirements..."*

AGL would like to point out that the difference between the two sets of rules may be less than it first appears. This is primarily due to the fact that the over-voltage limits in the NEM Rules is based on the relevant percentage over-voltage of the Normal Voltage. Under the NEM Rules, the Normal Voltage can vary between -10% to 10% of the Nominal Voltage. On the other hand, the over-voltage limits in the Technical Rules are based on the relevant percentage of a fixed value of Nominal Voltage. As a result of the differences in the definition of these baseline voltages, the over-voltage limits in the NEM Rules can be higher than the requirements in the Technical Rules in some circumstances.

AGL analysis shows that Immediately after a contingency event, the voltage variation allowed under the NEM rules is 43%, reducing to 35% at 0.2 seconds. In contrast, the maximum level at any time under the Western Power Rules is 35%.

Conversely, because of the additional 10% variation of the normal voltage from the nominal voltage the range under the NEM Rules can be up to 21% above nominal between 0.9 seconds and 3 seconds after the contingency event. Under the Western Power Technical Rules the voltage range is still limited to 35% during this same period.

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In AGL's view, before any decision is made on changes to the over-voltage limits in Figure 2.2.1, with respect of its relative difference to the equivalent NEM Requirements, careful consideration should be given to the underlying differences in the definition of the reference voltages.

Please contact Bruce Bennett on 02 9921 2606 for further information regarding this submission.

Yours sincerely,  
Alex Cruickshank  
Manager Energy Regulation

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