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Dear Sir

Enforcement and Compliance with Technical Standards under the National Electricity Rules – Submissions by the National Generators Forum

The importance of this particular Technical Standards Compliance Review cannot be understated. The failure to design, install and maintain the necessary control and protection systems with the appropriate operational arrangements to maintain the security of the electrical power system under most conceivable events can potentially have drastic consequences for Australian electricity consumers. The AEMC must not be distracted from its accountability for ensuring that our interconnected power system can be as good as any other in its ability to avoid significant dislocation resulting from the occasional incidents that can, and will occur, unexpectedly and unintentionally.

The understanding of the complexity of the interaction and potential instability between components in any power system is an area where the expertise is limited to a few people. It is a tribute to those people responsible for the development and operation of the current systems that there has not been a major calamity in the Australian National Electricity Market since its inception in 1998, despite some significant disruptive incidents.

It is my view that the submissions on this important matter should ideally be assessed with the support of independent and internationally recognised experts in the field of power system security. While the submissions from the National Generators Forum (NGF) (17 March 2006 and 23 March 2006) raise a number of important issues, they also fall short on full factual assessments on some of their points. TransGrid is also a party to the submission from the Electricity Transmission Network Owners Forum (sent 19 April 2006) which deals with comments made by the National Generators Forum on this matter. However, there are a number of references to our business and some apparent inferences about the technical integrity of our people about which I must respond separately.

The NGF is quite unfair to those with the expertise who were involved in the development of the original NEM Code of Conduct. Of course many came from the Transmission entities where the expertise was established and encouraged, since the Transmission entities in each State were responsible for the management and operation of the interconnected power system at that time. It was logical and appropriate that some of those experts moved to the new institutions such as NEMMCO and NECA at the commencement of the market.

Many of these same engineering and analytical experts are in fact still involved with the examination of the data and information associated with major NEM disruptive incidents. The assessment of issues and the recommendations necessary to sustain the best/optimal security outcomes into the future are summarised in the respective NEMMCO reports on these incidents. In a number of these incidents, the subsequent analysis by the transmission and NEMMCO experts have detected inherent problems with the existing control and protection systems (including the generation equipment) that have required immediate improvement, but which would not necessarily have been found by any non-intrusive compliance testing regime.

The NGF's selection of the 13 August 2004 event involving TransGrid equipment can be used to illustrate this point.

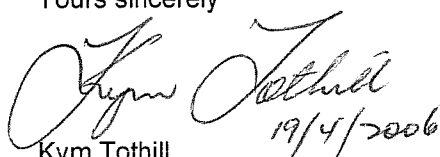
The Final NEMMCO report on this matter (dated 28 January 2005) makes it clear that the generator differential protection on three generation units operated on the first re-closure when they should not have. The actual problem with the generator protection arrangement appeared to have existed since the design and commissioning stage, and had been undetected by all parties until that event. NEMMCO has subsequently reported (Update report dated 14 September 2005) that the generator differential protection settings have been adjusted pending replacement of the relevant protection relays. The NEMMCO reports also make it clear that the negative phase sequence protection at another generating unit was faulty and that this caused a further generation trip. The initial NEMMCO report further shows that the second re-closure did not contribute to generation outages.

In their analysis, the NGF makes inaccurate assertions about the adequacy of TransGrid's condition monitoring of the current transformers and incorrectly claims that re-closure was installed for a busbar fault. TransGrid has a comprehensive condition monitoring regime in place covering all equipment classes including current transformers. In addition, the current transformer in question was on the line side of the relevant circuit breakers and it is good electricity industry practice to re-close after attempting to interrupt line faults in this situation (eg. for bushfires and lightning). (The vast majority of line side faults are 'self clearing' and re-closure re-establishes system normal conditions almost immediately after these types of faults.)

TransGrid does not wish to debate all the other assertions made by the NGF in its submission and of course it does not have access to the detailed information associated with the other incidents raised by the NGF in other jurisdictions. However, in light of the material reviewed to date, it would seem that some of the conclusions in the NGF submission may need to be assessed cautiously by the AEMC. In this regard, the AEMC is again encouraged to utilise internationally recognised expertise to provide the necessary independent advice in this important area. This would also help facilitate a meaningful and credible analysis of the wider issues associated with this review and their impact on future power system security in the NEM.

Should you wish to discuss this matter further do not hesitate to call me on (02) 9284 3537 or, if you prefer the relevant AEMC staff member, you could contact TransGrid's Manager/Regulatory Affairs, Mr Philip Gall, on (02) 9284 3434.

Yours sincerely


Kym Tothill
General Manager/Corporate Development

19/4/2006