



12 August 2011

Mr John Pierce  
Australian Energy Market Commission  
Level 5  
201 Elizabeth Street  
Sydney NSW 2000

Dear Mr Pierce

### **ERC0120 - Definition of Temporary Over-Voltage Limits**

Origin Energy Limited (Origin) welcomes the opportunity to comment on the Rule change proposal lodged by Hydro Tasmania on the Definition of Temporary Over-Voltage (TOV) Limits.

Origin does not support this Rule change proposal. While Origin is sympathetic to the concerns raised by Hydro Tasmania, we are concerned that the Rule change proposal attempts to fix an isolated problem at Basslink by implementing a NEM-wide solution. This could have unintended and undesirable consequences elsewhere in the grid.

Our submission sets out the following concerns:

- the Rule change proposal could adversely affect the stability of the network while also imposing costs on existing generators without any prior notification or consultation;
- the proposal could increase the costs for new connections for an unclear system benefit;
- there is a lack of clarity and consistency between the policy intent and interpretations of the Rule change proposal; and
- no comprehensive risk assessment on the proposal has been carried out.

#### **Adverse effects for system stability**

Origin is firstly concerned that this Rule change proposal could have adverse effects on system stability. The proposed definitions could permit TNSPs, in conjunction with AEMO, to make changes to over-voltages without consulting or notifying affected generators. We identify two implications for generators. First, by allowing higher voltage disturbances, a plant could be exposed to voltages above its current designed limits. To minimise the potential plant damage and ensure a safe operating environment for staff, plant modifications are necessary, at significant cost to the generator. Second, if the generator is not informed or does not modify its plant then it could cause network stability issues, damage its equipment or introduce potential operational safety concerns. We agree with the AEMC that there is potential for cascading network impacts.

#### **Increased cost for new connection for unclear system benefit**

The Rule change proposal has the potential to increase the cost of new connections to the network. High voltage equipment would require the capability of withstanding higher TOV limits, which would raise the cost of connection and place a greater cost burden on generators. Origin therefore does not agree with the Rule Change proponent that "TOV constraint equations should remain unchanged (no on-going administration costs) in future" and that "increased trade will result". Raising the cost of connecting to the network, and potentially endangering network stability, does not appear to accord with the National Electricity Objective or benefit market participants.



### **Lack of clarity around policy intent**

There is some confusion around the definition of the TOV reference level between the Rule change proposal, the drafting and the AEMC's interpretation of the proposed change. First, there appears to be an inconsistency between the wording of the Rule change proposal and its suggested intent. The proponent has suggested the introduction of a TOV reference level. However, it is unclear from either the Rule change proposal or the proposed glossary definition whether the TOV reference level is limited to 110% of the normal voltage or if the level can be arbitrarily positioned above the nominal voltage (as suggested by the glossary).

Second, we find it difficult to determine the expected impact on the TOV limit curve. Figure 3.1 in the AEMC Consultation Paper suggests a different impact from Figure S5.1a.1 in Hydro Tasmania's Rule change proposal. The AEMC figure suggests a compounded percentage increase on the TOV limit whereas the Rule change proposal suggests the intent is a step change with no impact to the TOV limit curve.

In either case, however, it appears that the TNSP can impose a change which could significantly impact to the protection requirements for generation plant and equipment. As discussed above, Origin considers this potential impact could impose a significant cost on generators.

### **Lack of comprehensive risk assessment**

Lastly, we are concerned that the Rule change proposal does not include a comprehensive risk assessment addressing the potential impacts of the proposed change on the network, power system security and market participants. We appreciate that the AEMC's assessment will quantify these costs and benefits in the next stage of its process. However, without that information as well as a clear understanding of the proposal's implications, it is difficult for interested stakeholders to assess and quantify properly the implications of the Rule change proposal.

### **Further information**

If you have any questions or would like to discuss this submission please call Hannah Cole on 02 8345 5500.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Phil Moody".

Phil Moody  
Group Manager - Commercial, Analysis & Risk Services  
Energy Risk Management