

AEMC Consultation on NEMMCO Rule Change Proposal – “Technical Standards for Wind Generation”

TransGrid Submission

TransGrid is party to a joint submission on the above matter by the Electricity Network Owners Forum (ETNOF) provided under separate cover and supports that submission. In particular, TransGrid and ETNOF support, in principle, bringing wind generators under the existing framework for establishing performance standards for generators requiring access to the interconnected power system.

However, at a more detailed level, TransGrid has become aware of a possible problem with the proposed new clauses S5.2.5.13 (b) (3) (i), S5.2.5.13 (b) (4) (i), and S5.2.5.13 (c) (4) (i). In our work with NEMMCO, and other interested parties on the relevant working groups, we agreed to changes in the way Automatic Voltage Regulation (AVR) requirements were to be specified. This agreed position is now reflected in the aforementioned proposed new clauses, and the intention was to achieve technology neutral performance specifications.

Specifically, the new clauses are based on the assumption that an AVR gain of 200 was equivalent to a voltage regulation tolerance (set point error) of 0.5%. However, in practice, it appears that this equivalence only holds under open circuit conditions where a 0.5% set point error will be equivalent to an AVR gain requirement of approximately 200 (actually slightly higher due to generator saturation). More usual conditions involve connection with the network where the gain requirement to achieve a 0.5% set point error depends on:

1. generator parameters;
2. the operating point, and
3. external system impedance.

As a result, the gain requirement is often significantly higher than the proposed 200. By way of example, TransGrid is aware of at least one NSW generator requiring a gain of around 600 to achieve the 0.5% set point.

To address this issue TransGrid would be pleased to work with the AEMC and NEMMCO to revise these requirements ahead of the next stage of this consultation. To this end, please feel free to contact Mr Michael Bradbery from TransGrid on (02) 9284-3090 or via e-mail michael.bradbery@transgrid.com.au

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