

Wind Grid Code Update

Key issues being addressed:

No 1.

Fault Ride Through Requirement WFPS1.4.2 (a) - Reactive Power Exchange by Wind Farms during and following System Faults

Aim

The aim of this update notice is to inform the wind power industry of ESB National Grid's (ESBNG) plans to address the outstanding issue of reactive power exchange by wind farms during and following fault conditions.

Background

The Grid Code for Wind (WFPS1)¹ has been approved by the CER. Recently, it has come to our attention that the wording used to describe the requirements for reactive power exchange of wind farms during and following fault clearance is somewhat ambiguous and open to interpretation. In WFPS1.4.2(a) it is stated that "*The Wind Farm Power Station shall maximise reactive current to the Transmission System without exceeding WTG limits.*" Essentially there are two reasons why this issue requires clarification. Firstly, reactive current injection from a wind farm during a fault must be sufficient to operate system protection correctly. Secondly, following fault clearance the exchange from the wind farm must be sufficient to avoid transient voltage collapse occurring on the system.

Plan

ESBNG will be addressing the issue in the following way:

Information from various dynamic simulation studies that are being carried out by ESBNG will be used to aid in our understanding of this reactive power exchange, with the intention of defining WFPS1.4.2 (a) more clearly. The simulation studies include wind turbine generator dynamic models received by ESBNG, details of which can be found on our website².

The progress of these studies largely depends on the quality of the models submitted. ESBNG is of the opinion that receipt of models in compliance with Stage 2 Requirements³ would facilitate clarifying and resolving this issue more quickly.

¹<http://www.eirgrid.com/EirGridPortal/uploads/Regulation and Pricing/WFPS1.pdf>

²<http://www.eirgrid.com/EirGridPortal/uploads/Regulation and Pricing/Appendix-22nd November.pdf>

³ as detailed in the Proposed Planning Code Appendix Grid Code Modification. Available on our website at the following link <http://www.eirgrid.com/EirGridPortal/uploads/Regulation and Pricing/Modelling Rqrts for WTG MPID126 11Oct.pdf>

Results from Studies

It is intended that any proposals emerging from the findings of these studies will be communicated back to the wind power industry for consultation prior to any revisions of the Fault Ride Through requirements in clause WFSP1.4.2 (a) of the Grid Code.