

TSO European Wind Integration Study (EWIS)

Towards a Successful Integration of Wind Power into European Electricity Grids

HARMONISATION OF GRID CODES - REQUIREMENTS FOR WIND GENERATORS

Position Paper

June 2009

Introduction

The activities of the EWIS project are of further relevance to the grid code harmonisation activities of ENTSO-E. This paper suggests how the EWIS findings might be best directed to supporting these Grid Code harmonisation tasks.

In particular, a number of benefits would arise if the TSOs initiate activities on preparing harmonised Grid Code requirements for wind generation prior ENTSO-E is guided by the newly constituted European regulatory agency (ACER). Furthermore, the establishment of a working group dedicated to this task would provide a context for EWIS grid code harmonisation recommendations.

EWIS Activities

The EWIS project, as defined in its contract to the European Commission, is committed to providing a proposal for Europe-wide harmonised Grid Code requirements relevant to wind generation in high voltage transmission grids.

To date, the EWIS project has collected and compared details of current European Grid Code requirements with respect to interfacing wind generation to networks. The investigations point out that there is evidence of a considerable convergence on technical requirements including the controversial issue of 'fault ride through' (the need to be able to very quickly re-establish power output following a network fault or voltage dip).

Technical analysis currently being undertaken by EWIS will – after completion – provide recommendations and supporting evidence concerning the necessary requirements from a European TSO perspective, e. g. establishing the trade-off between alternative criteria and the scope for insecurity including the need not to incur additional costs into the electricity system.

Grid Code Development Options

For the further procedure it is assumed that a European Grid Code will specify the network interface requirements. These will include required technical characteristics, information exchanges, and protocols for normal and emergency operation. For the most part, the Code would contain rules associated with security and reliability areas identified by ERGEG.

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The development of a European Grid Code requires a number of work areas, such as:

- Establishing the scope of the code (i.e. proposals for content and the relationships with the content of other codes). In a first stage, this will include the establishment of a glossary of key definitions.
- Providing proposals for the code governance and modification mechanisms. This may also inform decisions concerning which parts of the code should be implemented by comitology or other mechanisms and policies that would achieve the required enforceability of key requirements.
- Establishing the initial technical detail for the various code parts (including, for example, specific requirements for particular user classes and/or particular regions where some variation would need to persist). Such work could be undertaken by working groups progressing often in parallel but with reference to key definitions. The resulting detailed requirements may be:
 - Fully incorporated into an initial code; or
 - Established as separate documents with further modification the subject of specific governance arrangements for that document.

Whether code segments can be incorporated into a European code or established as standalone documents referenced by a main code depends on the outcome of the work on the code structure and governance. However, whichever approach is finally adopted, the technical details will need to be worked up. Additionally, the outcome of the EWIS project may provide useful initial material for TSO preparation of a legal document for grid code harmonisation.

In order that the proposals are included into a final European code structure, the work will be guided by ENTSO-E. Further wind industry comments could be incorporated, through a consultation process. This would permit analysis from EWIS and views from the EWIS stakeholders to be incorporated.