



EUROPEAN WIND INTEGRATION STUDY

To best address the network challenges, European Wind Integration Study (EWIS) aims to bring forward constructive recommendations from quantitative analyses of the technical and economic aspects of the existing network infrastructure, associated operational procedures and potential future transmission developments and investments.

To achieve the successful large-scale development of wind power to meet Europe's ambitions for renewable energy and its secure accommodation in the power system, Europe's transmission networks must transport production from wind generation sites to load centers in an efficient way and help manage wind variability by harnessing diversity and backup supplies.

The European Wind Integration Study (EWIS) builds on earlier work (including statistical work on Europe's wind resources by EWEA) to derive a set of network scenarios from which challenging technical, operational and economic conditions are identified. The study will then identify mitigation options for these issues and determine their relative merits.

Taking a pan-European viewpoint, EWIS not only seeks to accurately and appropriately represent the geographic distribution and statistical aspects of wind and other users, but to ensure that identified measures are consistent with a single-market approach. The study is combining wind generation experience and examining new technology solutions to maximize network capacity and flexibility (forecasting techniques for network loading, and risk assessment facilities).

Key issues of the study

Many of the challenges that are being addressed by EWIS are already apparent to Transmission System Operators, wind developers and operators and further market participants:

- Speeding up authorization procedures for new connections and reinforcement of the transmission networks to alleviate grid bottlenecks (whether internally or across borders)
- Enhance technical compatibility and complementary between wind turbines and networks to facilitate further wind development, minimize industrial costs and maintain the actual level of security of supply.
- Establish efficient arrangements to make best use of existing network assets while also providing a sound basis for the timely investment in new transfer capacity to accommodate both wind and its required backup.
- Enhance balancing arrangements to ensure real-time delivery of acceptable security, quality of supply and minimization of operational and balancing costs.
- Establish best practice in relation to the operation of systems with large amounts of wind power.

2nd phase launched in 2007

Following publication of the EWIS Phase 1 Report in February 2007, a 2nd phase of the study was initiated in June 2007. This phase covers all the European synchronous areas (Ireland, Great Britain, Northern Countries and UCTE including Baltic countries) and looks in detail at scenarios covering the immediate future to 2015. The 28 months project is being undertaken by 15 TSO companies, with the support of the European Commission, and in collaboration with a wide range of stakeholders.