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Large-scale integration of wind energy in electricity systems, new industry study released -

Distortions and institutional deficiencies in European electricity markets are main barriers

Brussels, 5th January 2006 — A comprehensive report (1) published by the European Wind Energy Association (EWEA) provides analysis of the technical, economic and regulatory issues concerning the large scale integration of wind energy into European energy markets. In order to further evaluate these issues, EWEA and the Spanish Wind Energy Association (AEE), with the support of the European Transmission System Operators (ETSO), have organised a Conference in Madrid on 24-25th January 2006 *, with the participation of manufacturers, promoters, services companies and a range of international system operators.

"The capacity of the European power systems to absorb significant amount of wind power is determined more by economics and regulatory rules than by technical or practical constraints. Already today a penetration of 20% of power from wind is feasible without posing any serious technical or practical problems", said Corin Millais, EWEA CEO.

The European Commission has concluded that current electricity markets are not competitive for four main reasons: lack of cross-border transmission links; existence of dominant, integrated power companies; biased grid operators; low liquidity in wholesale electricity markets. These four barriers are also the main institutional and structural deficiencies preventing new technologies such as wind power to enter the market.

"*Wind energy does face barriers - not because of its variability but because of a series of distortions and institutional deficiencies in European electricity markets that are neither free nor fair*", said Millais. "*The reason why wind is not more fully deployed across is Europe is because of structural and market flaws, not technical issues".*

There is an urgent need to address inefficiencies, distortions and historically determined institutional and legal issues related to the overall structure, functioning and development of the broader European electricity markets and power infrastructure.

Possible actions to solve these issues include:

- Reduction of market dominance and abuse of dominant positions;
- Effective competition policies in the power sector;

- Full legal and ownership unbundling between transmission/distribution, production and trading activities;
- Improvement and expansion of cross-border interconnections between Members States;
- Undistorted third party access to the grids at fair tariffs and removal of discriminatory practices;
- Adequate grid codes that reflect the nature of the technologies.

Major issues for the integration of wind power include: changed approaches in operation of the power system, connection requirements for wind power plants to maintain a stable and reliable supply, extension and modification of the grid infrastructure, and influence of wind power on system adequacy and the security of supply.

EWEA also published a briefing note on "*Tackling the Intermittency myth*" (3), examining the issues of wind intermittency. *"Because the entire electricity system is variable, it makes little difference to add a variable technology like wind to the system, and up to a 20 % penetration there are little technical changes necessary",* said Millais.

The report follows a study on the same subjects published by the International Energy Agency (IEA) in September 2005 "Variability of Wind Power and other Renewables: Management Options and Strategies" (2), which concluded that *"ultimately, the question whether there is an upper limit for renewable penetration in to the existing grid will be an economic and political issue than a technical issue".*

Notes to Editors:

(1) "*Large scale integration of wind energy in the European power supply: analysis, issues and recommendations*", EWEA, December 2005. The analysis, conclusions and recommendations are based on a review of over 180 sources - published data, reports, research findings from all stakeholders across the power industry, operators, utilities and experts. This report is the most comprehensive and up-to-date assessment of the topic of large scale integration of wind energy in Europe. www.ewea.org

* *Wind energy and grids integration, an international conference*, Madrid 24-25 January 2006. For more information, contact: AEE, T. +34 917 451 276 - comunicacion@aeeolica.org

(2) www.iea.org

(3) '*Tackling the intermittency myth'*, Editorial in Wind Direction, examines the issues of the variability of wind energy.