

## **bne – Statement**

### **CEER-Public Consultation: Regulatory aspects of the integration of wind generation in European electricity markets**

**Berlin, 18.02.2010**

***Question 1:** How will the expected growth in wind generation affect the markets in which you operate? What are the key challenges you foresee?*

The growth in wind generation will, due to its intermitten nature, have a severe impact on electricity markets. Prices on electricity wholesale markets will be more volatile, thus affecting the economics of conventional generation plants by a change in prices and quantity risks. The higher volatility of wholesale prices combined with the higher price risks in conventional generation will have some noticeable impact on consumer prices.

At the same time, the lack of sufficient grid-capacity, particularly on cross-border connections, will cause a more frequent market splitting between and within the regional markets, again increasing the price-risks on the wholesale markets.

The growth of wind generation, again because of its intermitten nature, will induce a higher need for balancing energy, thus higher prices for balancing energy are to be expected. Congestions in national and/or international transmission grids will aggravate this situation,

The growth of wind generation will, beyond that, have an effect on the pricing of conventional generation, as it will reduce the yearly production and entail more downtimes of conventional generation. A reduction of overall conventional generation capacity could alleviate this problem, but as wind generation is not always available, this does not seem a feasible solution as long as there is not enough storage capacity available. Wind generation (when available) will to some extent squeeze out conventional generation on wholesale markets due to its low marginal costs, reducing wholesale prices. Which effect will prevail in respect of average wholesale prices depends on many parameters and needs further analysis.

In conclusion, the growth in wind generation will lead to higher risks and higher prices of conventional generation on electricity wholesale and balancing markets.

The security of supply within the EU could worsen, if not sufficient further development of the European and national transmission grids and the availability of balancing power will be secured.

The key challenges are the massive development of transmission grids, a market design that allows for short-notice trades, a liquid balancing market, the deployment of more balancing capacity, including demand-side management, and the development of storage capacity. Wind generation should be integrated into the markets, by giving incentives to reduce generation on the basis of price signals.

**Question 2:** *What are the implications for market rules? Can you identify changes which would better facilitate integration of wind generation, including management of intermittency?*

The goal has to be a highly integrated single European wholesale electricity market with a continuous intraday trade with implicit auctions and adequate short-term cross-border capacity availability. This implies short gate-closure times. Such a market would give the required price signals for the coordination of generation and would provide the opportunities for market players to adapt to the intermittent wind generation. Markets must be liquid and therefore open for small and medium sized businesses. A continuous intra-day trade could reduce the demand for balancing energy and thus have a positive effect on balancing energy prices. A high level of transparency is a prerequisite for a functioning market.

**Question 3:** *Would moving the market's gate-closure closer to real-time facilitate the deployment of wind generation? Would this have any adverse consequences on the functioning of the electricity power system?*

Yes, moving the market's gate-closure closer to real-time would enable the market players to better adapt their portfolios to the intermittent wind generation. The existing potential for reducing other than wind generation and using demand-side management can only be used if the market players can trade close to real-time. This is mainly due to the fact, that short-term forecasts (1 to 2 hours before real time) for wind generation are much more accurate than day-ahead forecasts.

The main problem of moving gate-closure to real-time is the system security. The transmission system operators have to collaborate more closely to be able to ensure system security. An adequate cooperation of TSOs and an adequate market design could solve this problem.

**Question 4:** *Are emerging cross-border congestion management models compatible with wind generation? Should further attention or priority be given to intraday capacity allocation mechanisms and markets, in light of the issues associated with forecasting wind generation?*

Only an implicit capacity auctioning is capable of coping with the problems caused by wind generation. Explicit auctioning is too time-consuming to allow for quick market-reactions. Of course, if intraday capacity is not available, none of the models is able to allow for market reactions. Intra-day capacity allocation is the key to the enhancement of wind integration and has therefore to be a priority when redesigning market rules.

**Question 5:** *Should wind generation be subject to the same balancing obligations and the same types of charges as other types of generation?*

Yes. Basically, the origin of deviations from planned generation or demand is irrelevant for the use of balancing energy. In both cases – wind energy balancing or conventional balancing – the Power-plants being able to produce balancing energy are the same. Splitting the balancing obligations in wind-generation and other types of generation would only lead to a split of the balancing market or to a hidden subsidy of wind generation. Thus different balancing obligations would lead to less efficient markets.

The question asked implies another question: who should pay for the balancing obligations of wind generation. When the balancing obligations are the same for all types of generation and the same prices for balancing power apply, wind generation will push balancing energy prices up for the entire market. A compensation for those higher prices is to be discussed in a broader political context and depends on the chosen regime for the promotion of wind generation.

**Question 6:** *Should TSOs engage in research and development (R&D) to address issues associated with a large share of wind generation included in the network? If so, how should the regulatory framework require or support this?*

TSOs are key-players in the electricity-business and therefore have to contribute to the development of a new infrastructure being capable of integrating generation on the base of renewable energy, including wind generation. Any investigated solution should be cost-effective and in line with the liberalised markets. The regulatory framework should require a comprehensive assessment of the impact of the planned measure on the functioning of the markets and on the market players. Any R&D engagement has to be in line with the market and no single market player or group of players is to be privileged.

**Question 7:** *Should wind generators face the same types of network charges as other new generators, calculated using the same methodology? What is needed to provide a sufficient incentive for generation in choosing where to locate? What is needed to provide an appropriate balance of risk among market players? When should this not be the case?*

There is no general answer to this question. It all depends on the regime for network charges in place, the goal in wind generation deployment, the support scheme for wind generation, the availability of suited sites, the current state of the transmission grid, etc. The aim should be to integrate wind generation into the market as an equal form of generation in comparison to conventional generation. Depending on that goal, subsidies should only been given as high and as long as necessary – but in general as little as possible.

**Question 8:** *Broadly, what is the appropriate allocation of responsibilities, risk and cost among market players in developing new network infrastructure (e.g. ahead of or in response to new generation connections)? Should this be different for wind generation? Where is harmonisation required?*

See question 7

**Question 9:** *Do you agree that the “supergrid” issues for regulators identified in 5.1 are relevant? Is there anything else European regulators should be considering?*

The issues identified in 5.1 are all relevant. Regulators should additionally consider the interaction of the regional markets. The market rules in the different regions are not fully compatible. This will lead to a sub-optimal allocation of cross-border capacity and distorted

prices. Moreover, the full potential for the integration of intermittent generation can not be used. If two or more regions are to be linked, as planned in the supergrid initiative, a full integration of those regional markets is a pre-condition. This ultimately has to lead to a full harmonisation of market rules in all concerned regions.

**Question 10:** *Is the current ownership structure of the offshore lines or their regulatory framework a potential issue for the integration of offshore network? Are there other considerations affecting this ownership structure?*

The ownership structure of the offshore lines is an issue for the integration of an offshore network as any kind of network charge taken in addition to the charges determined within the existing markets and the future implicit auctions system is an obstacle for the market integration. The challenge is to find a system for network charges that encourages investments in offshore grids and at the same time allows for a fully integrated market. The regulatory framework has to define fair rules for the allocation of network charges, including the offshore lines.

**Question 11:** *Do you agree that the Regional Initiatives should be used to address the issues associated with the development of the regional projects? What challenges does this present?*

See question 9. It will not be sufficient to address the Regional initiatives, as the different market rules between regions will not lead to the economically best outcome. A further harmonisation of the regional efforts is the key to achieve the single European market.

**Question 12:** *What other issues should European regulators consider in relation to the integration of wind generation?*

It is important to realize, that, due to the meshed character of electricity grids, measures taken in one region can have an impact on neighbouring regions. This applies for measures like grid development, investments in generation as well as market design or support schemes. With the enlargement of interconnection capacity, this interaction of measures gains importance. Only a EU-wide harmonized strategy will, in the long run, be able to accommodate for those interactions and provide a fair balance of interests between member states. The vast amount of intermittent wind generation in Germany is a prominent example for the kind of interactions to be expected, as the high volume of wind generation influences the network security and the wholesale prices in every neighbouring country. Those effects have to be assessed and considered in the decisions of the European regulators.