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Swedenergy response to the public consultation on ERGEG's Regulatory aspects of the integration of wind generation in European electricity markets

General comments

ENTSO-Es ten year development plan, TYNDP, is an ample opportunity to describe the current status of the network. There is a lack of consistent reporting from the TSOs on the current use of the transmission grid, where bottlenecks are located, the amount of time that certain lines are congested, and the reasons for the congestion. It should clearly be a part of a development plan for wind power and infrastructure to map the current status of operations of the infrastructure to be developed.

It should be clear from the beginning that the infrastructure development should be aligned with the political goal set by national and EU authorities. As an example the base case by ENTSO-E in the TYNDP must include the fulfillment of the 2020-goals.

Question 1: How will the expected growth in wind generation affect the markets in which you operate?

With the expansion of wind generation there will be increasing distance between generation and demand and the generation pattern will be more difficult to foresee in advance. This means:

- Need for more regulation of the system, large generation capacity has to be reserved for regulating both up and down, taking that capacity out of the market
- More volatile prices and sometimes zero and even negative prices
- Decreased operation time for base load generation, and risk for crowding out of other CO2 free base load generation as nuclear
- Network security concerns, increased loop flows in the transmission network and lower predictability means reduced cross-border capacity for trade
- More difficult to plan the operation one day in advance

What are the key challenges you foresee?

- There is a strong and urgent need to build transmission capacity – both internally in the countries and cross-border – to even out the variations in wind power, reduce the risk of crowding out of nuclear, increase size of the markets and facilitate market integration.



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- Increased market integration is becoming much more important, especially integration of intra-day trade and balancing markets and to supply regulation capacity to countries where there is a lack.
- One of the main challenges is to set up a balancing market that avoids institutionalizing distorted price signals by not having all (i.e. including wind) participants in the balancing market.
- Wind generators should be designed to be more resilient to disturbances to increase their role in regulating the system and to reduce the risk for cascading errors.

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?

There is a need for new market design and support systems in some countries that would make wind power integrated in and part of the market. Support for wind power should be constructed in a way to distort the rest of the market in the least possible way. The support should also be concentrated to one support scheme in order to be more transparent, instead of spreading it to support for connection charges, specific scheduling priority, absence of demand on ancillary services, etc.

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?

Countries where intra-day markets are not yet implemented should do that as soon as possible. That would move gate closure much closer to the operating hour. Only if the prices on the intra-day markets become too different from the prices on the day-ahead markets, which are the markets that financial hedging contract are settled against, it should be considered to move gate closure of the current day-ahead markets closer to the operating hour. Also, if gate closure for the day-ahead market is moved closer to real time, other generation sources, as e.g. thermal generation will have increased difficulties and costs to be able to generate on time if they are scheduled.

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?

The model for trade and for integrating the regional markets proposed by PCG and endorsed by the Florence Forum December 2009 is very well compatible with wind generation, assuming that wind power is integrated into the market as described under Question 2.

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

Yes. In principle, any system costs that wind power has, should be directly dealt by the wind generating owners themselves. If the market signals in the balancing

market do not reach the wind generators the costs of less security of supply (e.g. when it does not blow) is moved to some other stakeholders in the system distorting their costs.

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?

Yes, there is a need to increase the share of R&D performed by TSOs. Of course, the TSO business is a regulated business, so regulators have to find a way of incentivising R&D in order to strike the right balance.

Apart from what is included in the concept of Smart Grids there is need for development in projects leading to harmonization of support systems, congestion management, set a platform for real integrated balancing markets and finally engage in research in how localization signals through congestion management and grid tariffs can be used and harmonized.

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?

Yes, wind generators should face the same types of network charges as other new generators, calculated using the same methodology, see answer to Question 2. If the network charges are constructed in the right way, that should be sufficient to give the incentives required, and the appropriate risk balance between players.

Of course, Transmission reinforcement takes – due to the longer licensing process – longer time than building new wind farms, and there may be need to give legal support to prioritize certain areas at the time, in order to make the process smoother.

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 harmonization required?

All types of generation should face the same requirements and costs.

To avoid tactical measures and “free riders”, it might be appropriate to introduce cost sharing principles for all generators’ connecting fees. This is especially important when it is necessary to enhance the network.

Financing mechanisms for required investments in reinforcements of transmission lines should be harmonized within the EU. All who benefit from the investment should contribute to its financing.

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?

Yes, the “supergrid” issues are relevant, but it is not only a question of off-shore grids. Also the mainland grids are equally or even more important, since electricity have to be transmitted from the point of generation to where the consumption is located. The super-grid issue hence has to cover the whole way. Such a pan-European grid also raises the issue of who should pay. The customers benefiting from the network may be far away from where investments are made, and this means that a pan-European regulation has to be in place in order to make sure that the one who benefits also is the one that pays.

Further, the idea of smart grids is to increase communication and thus make actors able to faster become aligned with occurrences in the market. Thus one issue is how to make intermittent demand and intermittent supply sources more active in the market.

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 regulatory framework in transmission issues is not sufficiently developed on the European scale. In order to have a truly integrated European market, there is need to have not only an ownership structure that is suited to its purpose, but also a regulatory framework that has the same scope, and which takes away national peculiarities. Harmonization is still missing.

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?

Yes, regional cooperation could be an important step towards pan-European solutions.

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

No further proposals.



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