

Nordic TSO strategy for wind and sector integration
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Finnish Wind Power Association (FWPA) thanks for the possibility to comment on the Nordic TSO strategy for wind power and sector integration. Please find our answers below your questions.

1 What is your name and organization?

Anni Mikkonen, CEO of the Finnish Wind Power Association

2 What are the key challenges to wind development and sector integration?

There are several challenges when thinking about wind power development. But if we focus on the challenges on TSOs field of business key challenges in wind power development are grid bottlenecks and lack of grid connection. There are sometimes also challenges between the timing of the grid connection and planned production of a wind farm.

In the long run more flexibility and sector integration in the electricity system is also needed.

3 How should the Nordic TSOs promote wind development?

The Nordic TSO's should increase their co-operation and FWPA welcomes the common strategy of the Nordic TSO's as one instrument to increase the co-operation.

The good wind power locations are not evenly distributed around the countries and most of the wind power capacity may be located geographically in a rather small area. For example, in Finland about 40 % of the installed capacity and 40 % of the project pipeline is in the Pohjois-Pohjanmaa (Norra Österbotten) -region. It is extremely important that the TSO's actively develop the transmission system and make sure that there are no transmission bottlenecks within the country.

We would also like to emphasize that the Finnish TSO Fingrid is doing extremely good work in promoting wind power development. Fingrid is proactive, open, and always willing to have a discussion with the developers and association representatives. Fingrid also tries to forecast the wind power development and develop the grid infrastructure accordingly. The other Nordic TSO's should follow the example of Fingrid.

4 How should the Nordic TSOs promote sector integration?

The power in the small-scale production, storages, consumer behaviour etc. should not be overlooked by the TSOs in the future scenarios and sector integration. The emerging consumer level technologies and services could potentially have a huge impact on a whole system level, when the crowds start behaving similarly as a huge flock. Compare e.g., the emergence and system impact of consumer-PV in Germany in the past. The consumers and other electricity users have more options today and, in the future, e.g., having own production, energy storage, controlled loads, and operating in different emerging markets and services. Microgrids are also a potential future option, which may be an off-grid or on-grid solution. On-grid microgrids could provide benefits for the whole system, as well as microgrid owner, and consumers themselves, whereas off-grid solutions in the worst case could lead into extensive loss of consumers, decrease in system flexibility, and be more costly for all parties. Consumer engagement to stay in the common power system, receive benefits from it, provide system services, and thus provide benefits for the power system as a whole (& TSOs) should be well planned and formulated to obtain as optimal as possible system solutions and operations. The energy system should be looked as a whole, considering e.g., that also a small consumer can influence the integration of large-scale wind power.

5 What are the tasks the Nordic TSOs should prioritize in order to improve wind development and sector integration?

6 What are your plans/actions regarding wind development and/or sector integration?

FWPA promotes wind power development with information sharing and influencing the legislation, guidelines, and rules to make it more feasible to invest in ja produce wind energy.

With best regards,

Anni Mikkonen

CEO, Finnish Wind Power Association