

To: European Commission, DG Energy

Nordenergi calls for a balanced approach to locational signals in the upcoming white paper on deeper electricity market integration

Nordenergi is the collaboration between the Nordic energy associations Finnish Energy, Green Power Denmark, Renewables Norway, Samorka and Swedenergy.

- Locational prices from bidding zones reflecting structural congestion, will reduce the need for redispatch through better utilization of existing resources and grid. Demand response will also play a role in short-term optimisation.
- Improvement of the short-term markets through implementation of existing regulation is important to reduce need for balancing. Introduction of flow-based capacity calculation in all timeframes together with information on grid models should be prioritised.
- Over time, locational effects of bidding zones will contribute to reduced system costs as it will incentivise production in high price areas and consumption in low price areas, while incentivising TSOs to build out the grid to increase transmission capacity.
- Locational incentives can to a certain degree, also be provided through the design of support schemes, where they are needed, costs for grid connection, geographical or time differentiated grid tariffs and directly through system operation.
- Caution should be applied when introducing such administrative price signals as they depend on system operators, TSOs and regulators having better information than what is already reflected in the markets.
- Additional elements will also complicate the remuneration process, make it less transparent and new mechanisms will probably be less cost-efficient than appropriate configuration of bidding zones.

We refer to the upcoming white paper on deeper electricity market integration. We believe that the continued improvement of the internal energy market is indeed a prerequisite for the climate transition, while at the same time ensuring security of supply and competitiveness. We therefore welcome the upcoming white paper, building on, but not reconsidering, the recent amendments of the electricity market design (EMD) in 2024.

One of the key issues of the white paper seems to be mechanisms to reduce system costs driven by rising network charges and/or redispatch costs, as highlighted in a Joint Research Centre (JRC) report from 2024 on Redispatch and congestion management. There seems to be a clear potential for efficiency gains through reduced redispatch needs.

Achieving the climate targets largely relies on the deployment of distributed renewable generation. Currently the deployment of renewable capacity is mostly focusing on resource-rich areas with the highest capacity factors, not considering the grid capacity. This can lead to a mismatch in the system,

as those areas where renewable generation is focused do not necessarily align with where demand is located or sufficient internal transmission capacity exists. The need to transmit the generated electricity inside a given area could therefore regularly exceed the available grid capacity.

JRC results suggest that uncoordinated deployment will massively increase the need for curtailment and redispatch, but also other market interventions like operation of interconnectors. This means adjusting generator schedules after the market has cleared to achieve a physically feasible dispatch, as grids will be more and more constrained and incapable to fully transmit all available renewable electricity.

To address these challenges, Nordenergi suggests improving both operational and investment incentives. To achieve a better balance at the system level, locational investments signals may be needed for investments in renewable capacity, new demand and storage, for example batteries and hydrogen.

Adjusting bidding zones to reflect structural congestions at the border of a bidding zone, operational incentives can better reflect supply and demand available in the grid. The problems identified by JRC is to a large extent caused by bidding zone limitations that are not fit for purpose. Trying to solve the problem by introducing extra locational signals on top of BZs will not increase efficiency, hence it ought to be more costly for the customers.

In line with the current EU regulations, we find that flow-based capacity allocation should be introduced for the short-term physical market (such as the intraday market) as soon as possible.

In addition, it has been considered whether existing out-of-the market mechanisms, such as auctions for energy production, emissions free energy use and/or flexibility, should be adjusted to also incorporate a locational component. As the system will balance out only gradually over time, it has been discussed in how far short-term price signals should be improved as well.

The operational price signal can be improved by increasing the spatial resolution at which the European power markets are cleared. The Bidding Zone Review (BZR) offers an opportunity to take structural congestion into consideration when drawing appropriate zones. Further assessment is necessary as to whether increasing spatial granularity in an evolutionary manner, through appropriate bidding zone splits, is sufficient for a successful energy transition, or whether a transition towards an even more granular system might become necessary.

Nordenergi is of the opinion that nodal pricing is not a solution in the short and medium term since it is complex and requires large changes in the existing market design. In addition, the connection between the delimitation of BZs and the hedging possibilities for customers to cope with increasing volatile prices seems to be an argument against nodal pricing. A fundamental market design change would also bring significant uncertainty for new investments that are necessary for reaching climate targets.

The question is whether an incorporation of location and time signals into capacity mechanisms, RES schemes, grid tariffs, and flexibility tools, etc. would be possible and cost-effective in addition to necessary amendments of bidding zones. The introduction of additional measures might even be counterproductive.

We would like to recall that in the Nordic Market, the system costs, in particular redispatch costs, have been low limited due to the configuration of bidding zones. Recently balancing costs have increased, but this is due to the new balancing regime being partly flawed. We believe that bidding zones that reflect structural limitations of the grid give good incentives to locate production and consumption as

well as priorities for grid investments. For projects that receive financial support through an auction mechanism, the introduction can be done by adding a locational component to the auction. Adding such a component to existing and planned capacity remuneration mechanisms may prove important to maintain the feasibility of redispatch, as it ensures that capacity is available in the right places. Still, it should be recalled that appropriate bidding-zones will give the right basis for allocation of capacity remuneration mechanisms. In addition, grid charges can incentivize investment in the right locations if they include a locational component and this does not work against market signals. However, these additional elements will complicate the remuneration process, make it less transparent and the mechanism will probably be less cost-efficient than appropriate configuration of bidding zones. The problems identified by JRC are mainly caused by bidding zone limitation that is not fit for purpose. Introducing extra locational signals on top of BZs will not increase efficiency and quickly become more costly for customers.

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Nordenergi is the collaboration between the Nordic associations for electricity producers, suppliers, and distributors. Members are Swedenergy, Green Power Denmark, Renewable Norway, Finnish Energy and Samorka. Overall, Nordenergi represents more than 2,000 market actors (member companies), most of them active in the electricity sector, but also in other areas such as district heating, gas, and services. For more information regarding Nordenergi please visit www.nordenergi.eu. EU Transparency register number: 85161125283-02.

