

The Nordic financial electricity market

For the organised Nordic power markets to work optimally, there is a need for a liquid and transparent financial power market to enable market participants to hedge their price risk.

There are several reasons market participants need to hedge price risk; producers want to secure their earnings in the short and long run to facilitate investments in power production. For suppliers, hedging is necessary to offer fixed-price contracts to end-consumers.

Price hedging can be done through bilateral agreements between consumers and producers. However, such contracts are not public, and smaller participants are disadvantaged compared to what an open marketplace can supply; transparent future electricity prices. Transparent market prices are a common good that benefits society as a whole and give investment signals to the power sector as well as to large industries, government, and private citizens.

A price index, the Nordic system price, is used to gather liquidity

When the electricity markets in the Nordics were liberalised in 1991-2000, there was a consensus that the individual Nordic countries were too small to facilitate a liquid financial market. As a result, a price index called the Nordic System price was introduced to be used as a reference to financial contracts. The Nordic System price is calculated using inputs from the Day ahead-auction under the assumption that there is infinite transmission capacity between the Nordic bidding zones.

Based on the Nordic system price, contracts are listed at Nasdaq Commodities for days, weeks, months, quarters, and year. From tomorrow and up to ten years ahead. The contracts are pure financial and obligations.

However, as market trading in the physical power market always pays or receives the price in the bidding zone where they produce or consume electricity, a financial contract based on the System price does not cover the potential price difference between the area price and the System price. Therefore, a contract was introduced to cover this risk. Initially it was called CfD (Contract for Difference) but is now known as EPAD (Electricity Price Area Differentials). To exemplify, hedging the price in SE3 implies buying a system price contract and an EPAD specific to SE3. The EPADs are especially needed in areas where the area price is very different from the Nordic System Price.

Unbalanced areas call for TSO intervention

In the Nordics, there has been a long history of cooperation in the electricity sector, which has provided security of supply to all the Nordic countries. Today the Nordic market consists of 12 bidding zones. Several of the bidding zones do not have a good balance between production and consumption.

Asymmetries in the local power balance in a specific bidding zone create an imbalance in the supply and demand for EPADs and poses a barrier for hedging in the individual zones. Where this is the case, there can be the need for TSO intervention.

An example of this is the situation in SE4, where the Swedish TSO (Svk) anticipates the maximum load during a typical winter to be 4 800 MW while the available production is estimated to be 1 800 MW. Hence in the SE4, there is a strong imbalance between consumers and producers. Security of supply in SE4 is secured by, e.g., 6 200 MW transmission capacity between SE3 and SE4.

By using the transmission capacity as collateral, the Swedish TSO is now supporting the possibilities for price hedging in a pilot auction by issuing EPADs to the market. This is also possible in accordance with article 30 in the guideline on forward capacity allocation (FCA) (EU 2016/1719).

The preliminary result of the pilot has been positive. There has been increased liquidity in the Nasdaq EPAD market for SE4 and SE3, as well as for the system price contract.

Limitations in the Nordic market

We have seen diminishing liquidity in the Nordic financial market for several reasons. Many small bidding zones, asymmetric power balances, the limitation of using bank guarantees as collaterals and national tax regimes have undermined liquidity in the Nordic financial market.

Furthermore, the energy crisis has shown the shortcomings of the current financial markets in terms of collateral requirements that become unreasonable for many market participants and led them to leave from transparent marketplaces. Therefore, to reduce the barriers for market participants to participate in the financial markets, the collateral requirements should be reconsidered to increase liquidity. This could be done by reducing the collateral requirements for non-financial market participants with underlying physical assets or customer contracts and setting different requirements for non-financial and speculative actors.

During later years, the correlation between the System price and the individual area prices decreased. As the liquidity in EPADs is low, the benefit of the products has diminished, and market participants choose to do bilateral hedging. With lower liquidity, the trustworthiness is lower, increasing the risk of more participants leaving the market.

Even though the market faces many challenges, the SvK pilot shows that with a liquidity push from the TSOs, using the existing market product EPADs, the market can create a positive liquidity spiral. We, therefore, stress the importance of fostering the existing Nordic financial power market by ensuring that EPADs can still be used as a tool by the TSOs to boost liquidity.

And the sentence in Electricity Market Regulation Article 9, "transmission system operators shall issue long-term transmission rights or have equivalent measures in place, " **must remain in the regulation after the current market reform.**

To conclude

In the description of the Commission's proposals on virtual hubs with liquid transmission rights from zone to hub, there are many references to the Nordic model. We are glad to see that the Commission has found inspiration in our model and are eager to preserve and develop this model further. It is, however, unclear what the Commission's proposal will imply in practice for the Nordic model, as key methodologies and definitions are yet to be developed. We are also concerned about assigning too much responsibility to Entso-E and the Single Allocation Platform and emphasize the need of thorough stakeholder involvement in the further development of the financial forward market. We also note that different stakeholders interpret the Commission's proposal in different ways.

We take note of ACER's policy paper on the further development of the financial forward market, where the agency argues that the current Electricity Regulation seems generally fit for purpose to accommodate the solution proposed by the Commission. In the same paper, ACER also proposes that "equivalent measures" to long term transmission rights can be suitable for regions where EPADs already exist and where a shift to LTTRs could be considered too disruptive. Given the complexity in the proposal, it is in our view more appropriate to address the issue in the revision of Commission Regulation (EU) 2016/1719 (FCA guideline).

Nordenergi is the joint 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.