

Bringing New Energy to the Nordic Electricity Market

The Electricity market is a complex market with high price volatility. Key price drivers that are impacting production and consumption are: weather, fuel prices, EUA prices, storage of gas and hydro balance and grid capacity. We witnessed a historic “bull” run on Nordic and European electricity prices in 2021. The average costs of electricity in the Nordic Spot market soared 470 % from 2020 and in EU the average cost of electricity in Q4 2021 was more than four times as high as the 2015-2020 average. The surge in 2021 and 2022 is the result of increased global energy demand, shortage of natural gas, increased CO2 prices, lower than normal renewable energy production in Europe, low hydro balance in the Nordic area, flaws in the Nordic Electricity Market design and recent geopolitical events in Europe.

Soaring electricity prices negatively impacts utilities- and large consumers’ ability to manage price volatility risk at commercially acceptable terms on the Nordic exchange derivative market. National policies that are designed to shield end-users, in particular households, from excessive price volatility is commendable, but not sustainable in the long term. To mitigate the development, Nasdaq has collaborated with various stakeholders on solutions to improve liquidity in the Nordic exchange derivative market. Based on this, Nasdaq proposes the following solutions:

- **Reduce the number of bidding zones:** The transmission system operator (TSO) has a too narrow view on the short-term price signals from the physical market when assessing the socio-economic benefit of allowing differing prices between price areas, thus ignoring the distributional effects on end-users and the negative effects on market participants’ ability to manage price volatility risks. By establishing 12 bidding zones in the Nordic electricity market, the Nordic TSOs have created 12 different area prices. Increasingly, we see deviation and low correlation between the Nordic system price (i.e., the calculated price for a common Nordic bidding area) and the 12 bidding zones. This is especially visible between the bidding zones in northern Sweden / Norway vs. southern Sweden / Norway. Consequently, market participants that wish to manage the price volatility risk must enter both a Nordich exchange derivative produce with Nordic system price as an underlying and an Electricity Price Area Differentials (EPAD) for a specific bidding zone. The problem, however, is that with the high number of bidding zones coupled with limited number of fundamental players in the EPAD market, the overall EPAD market has become increasingly illiquid. This results in increasing hedging- and clearing costs because the clearinghouse is under a regulatory obligation to take account of low trading volumes, price levels, price volatility, etc. when calculating the margin requirements.
- **Adding liquidity to the existing forward market:** The Commission Regulation 2016/1719 (FCA) article 30.5 b) provide the regulators with legal basis to require the transmission system operator (TSO) to support hedging possibilities in the existing forward market, e.g., by auctioning EPADs that are fungible with the existing secondary market. In a report commissioned by the Swedish Energy Market Inspectorate, Merlin & Metis has recommended this as a preferable alternative to introducing Long Term Transmission Rights (LTTs) on the interconnector connecting Sweden to

Finland. This solution is currently being assessed by ACER. Other possible solutions to add liquidity to existing forward market, is establishing a market maker scheme, alternatively, requiring the TSOs to establish a countertrading practice. We believe that both are viable options for the regulator under the FCA article 30.5 b).

- **Increase cross-sectoral collaboration:** Collaboration between Energy regulation and Financial regulation should be strengthened, to drive regulatory change on a Nordic and European level that better balances the need to monitor and regulate systemic risk with the needs of the Nordic exchange derivative market. One example is to allow a more flexible use of guarantees in case of stressed market conditions, whilst ensuring resilience. This measure could be a permanent measure or as one of many tools in the toolbox available to the market participants when there is a need to shield the end-user from excessive volatile prices.

We believe the above proposals will promote liquidity, transparency and competition for the benefit of all market participants.

A well-functioning exchange derivative market is also important for the green transition. The Nordic power market needs massive investments during the next decades to secure the net-zero targets. The key to succeed with the green transition is to secure efficient markets that allows the market to hedge against price volatility and counterparty risks. Liquid and transparent financial markets secure and attract funding of renewable project from the capital markets. Long term power purchase agreements (PPAs) also use long term price formation in financial market as a price reference. In addition, PPAs are hedged via complementary trading in the financial market closer to delivery (2-3 years) to reduce price risk and counterparty risk. The increase in the use of PPAs as an enabler for renewable investments must be linked with liquidity in financial markets.

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