

Statement from the Nordic TSOs on the European Commission “Public Consultation: Revision of the EU’s Electricity Market Design”

Introduction

On Monday 23 January the European Commission launched a public consultation on an electricity market design reform. The purpose is to better protect consumers from excessive price volatility and higher energy bills, support their access to secure energy from clean sources, ensure stable and well-integrated markets and ensure investments in renewables and flexibility resources at a sufficient scale and pace.

The Commission acknowledges that EU for many years has reaped the economic benefits of an efficient, well-integrated single energy market that has ensured security of supply and engendered the decarbonisation process. A key element is cross-border interconnectivity ensuring efficient and secure operation of the power system. However, the Commission also recognizes shortcomings, especially in the way excessive gas prices are impacting electricity prices and bills.

This statement is a response from the Nordic TSOs – Energinet, Fingrid, Statnett and Svenska Kraftnät – to some of the main elements in the EU consultation. European TSOs have prepared a common response to the consultation through ENTSO-E, the European Network of Electricity TSOs. The Nordic TSOs have actively participated in this process, and support most of the resulting responses. However, through this statement we want to highlight several topics that we find of particular importance.

Key messages

- Europe’s current energy challenges stem from high demand amidst insufficient supply due to dependence on Russian gas and a lack of cheap renewable energy. The current **crisis is not due to structural design failures** of the EU electricity market. The well-functioning of short-term markets based on **marginal pricing must be kept** to ensure efficiency in dispatch and investment decisions.
- We acknowledge the need to find ways to better shield households and businesses from sustained periods of high prices. Even so, we urge policy makers **not to radically overhaul the**

current market design, which is both efficient and flexible and underpins secure system operation and security of supply. **Intervening in the functioning of the electricity market is not the way to secure affordable prices** to consumers. A more efficient way is to **provide targeted financial support**, where consumers are not compensated proportionately per kWh of consumption, but instead in the form of e.g., a lump sum payment in order **not to distort price signals and to maintain consumer's incentives to save energy in times of price spikes**. These **support measures should be temporary and limited in scope**.

- The EU electricity sector faces several long-term challenges triggered by rising shares of variable renewable energy, and large increases in electricity demand. This includes ensuring investments in renewables, but also weather independent low-carbon technologies to ensure adequacy and security of supply until large scale storage and other flexibility tools become available. **Long-term contracts such as Power Purchase Agreements (PPAs) and Contracts for Difference (CfDs) can be used** to finance these massive investments. The long-term contracts **should be designed to minimise distortions to day-ahead, intraday, and balancing markets** by decoupling the financing stream/support payment from the actual injection of the generation assets.
- To be able to integrate the vast amounts of new renewables that are needed to achieve decarbonisation by 2050, we also need to **scale up investments in grid and transmission infrastructure**. Faster permitting is needed. A maximum time for permitting has to be set. Sufficient resources for permitting authorities have to be secured. But this may not be enough to integrate renewables at the pace we need. **Stronger and more granular locational signals may be needed in the future for the location and dispatch of new generation and demand**, as well as sustained and transparent price signals for grid development and flexibility resources to ensure market efficiency by better matching markets and physics.
- A fully carbon neutral energy system, in which huge amounts of electrified consumption and low-carbon generation technologies are key drivers, will become increasingly weather-dependent. **A broader range of low-carbon flexibility resources will be needed to balance the system**, both on the generation and demand side. However, this requires consumers to be exposed to more granular price signals across time and space. Policy makers should therefore **not compromise the potential of demand side flexibility by an unbalanced use of fixed price contracts** (e.g., CfDs and PPAs) to protect consumers against price volatility. To support a more active demand side, **we recommend accelerating measures facilitating an active consumer participation, such as the deployment of smart meters, as well as learn from experiences from the current crisis**.

The functioning of short-term markets and marginal pricing

A central question in the consultation is about potential alternatives to marginal pricing. First and foremost, marginal pricing is a description of outcomes of and price formation in a free market. It is not a design choice. The alternative to marginal pricing is price regulation.

We find marginal pricing as the bedrock upon which the efficient and effective functioning of the integrated European short term electricity markets operate. It is therefore essential to safeguard the predominant role of marginal pricing in power markets to ensure that the gains of the recent decades continue to benefit European society in the future. The European Single Day Ahead and Single Intraday Coupling have been painstakingly built over many years and demanded unprecedented levels of cooperation between policymakers and stakeholders to ensure the establishment of a robust and competitive power market that spans the EU and beyond.

The application of marginal pricing, reflecting the pricing mechanism of a free market, in the European Day Ahead market (DA) – the largest physical organized electricity market in the world – has proven itself over many years to be the most efficient and effective pricing mechanism to match supply and demand maximizing social welfare on a continent-wide scale. Price formation in the DA market provides a reference price upon which markets in the forward, intraday and balancing timeframes rely. It is therefore essential that long-term contracts in the form of CfDs and PPAs incentivize continued participation in the DA market to provide sufficient market liquidity.

Ensuring that markets are flexible, competitive, and able to respond to system needs at short notice is ever more critical given the expanding share of renewable power in the energy mix and the electrification of transport, heating, and industrial processes. Without reliable (marginal) price signals in short-term markets, it will not be possible to unlock flexibility on both the supply and demand sides. It is therefore essential that any proliferation in PPAs and CfDs does not interfere with the functioning of short-term markets by leaving them weaker, illiquid and ultimately unable to respond to the challenges and needs of the future low- (or even zero-) carbon energy system.

Financing of variable renewable generation through long-term contracts

Massive investments in new, renewable generation capacity are required. Making such investments financially viable and bankable requires using long-term financial instruments (> 5 years). The consultation discusses two main instruments: state support via two-sided CfDs and commercial PPAs.

A PPA is a commercial long-term contract between a consumer(s) and a generator/supplier. PPAs do not require state support, but developers will require long durations, which is typically not viable for smaller consumers. The Nordic TSOs strongly believe that voluntary contracting is preferable, but at the same time acknowledge that PPAs may only be relevant for a limited share of new generation at European level, leaving state supported CfDs to play a significant role when relevant.

The Nordic TSOs furthermore agree that state-backed CfDs are an effective instrument to deploy renewables, but note that the classical, injection based CfDs (fixed feed-in tariff) lead to significant distortions in intraday and balancing markets. Both for efficiency and system-security concerns it is

important that generation assets bid into all markets according to their true marginal costs, and that they consider system needs reflected through price signals when planning maintenance, etc. The most important design choice with respect to CfDs (and long-term contracts in general) is therefore to decouple injection from the financing stream/support payments. Several options exist, which can realise this, and we recommend to quickly assess and develop them for practical use for upcoming investments.

It should further be noted that PPAs and CfDs can coexist but cannot be used for the same capacity. However, PPAs and CfDs can be combined by a “carve-out” mechanism, in which a generator participating in a CfD tender can exempt a share of its capacity and develop it under a PPA instead.

Finally, the consultation addresses the possibility that state-backed CfDs or similar contracts could be imposed on existing generation, coupling these to a mechanism to reduce consumer prices. The Nordic TSOs strongly oppose the idea of applying CfDs or similar long-term contracts to existing generation assets, as in reality it means returning to a model with fully regulated prices and provide regulatory uncertainty for future investments.

Affordable electricity for consumers

Affordable electricity for consumers is the core of this consultation resulting from the very high electricity prices triggered by high gas prices. There is a general acknowledgement among most stakeholders that these high prices shall not be suppressed “on the margin”. Yet some inframarginal generators could be exposed to CfDs, revenue caps etc. Intuitively it seems that this could lead to lower and more affordable energy bills for consumers. The Nordic TSOs would however like to highlight two issues in this regard:

- Securing affordable prices to consumers should not be done by interfering with the functioning of electricity markets. A more efficient way is to provide carefully targeted financial support where consumers are not compensated directly proportionately per kWh of consumption, but instead in the form of e.g., a lump sum payment to maintain consumer’s incentives to save energy in times of price spikes. Support should be temporary and limited in scope to avoid market distortions and to avoid reducing consumers’ incentives to reduce demand when beneficial for the system.
- Applying long-term contracts such as CfDs may in the short-term prevent consumers from being exposed to high price spikes or (shorter) periods of high prices. Contracts with final consumers should, however, retain incentives to react on short-term price variations, e.g., through fixed volumes, where deviations are settled on the spot market.

It is essential for a secure system operation and efficient dispatch through short-term markets that consumers are exposed to price spikes in periods of a strained power system. High prices incentivise consumers to reduce consumption. This is, however, not compatible with affordable prices if such conditions last over long periods. The solution that might cope with both objectives (secure system operation/efficient markets vs. affordable prices) is to make the protection of consumers financial

(e.g., through CfDs). By doing so, consumers will still face high prices spikes (on the margin), but in addition receive a financial transfer to compensate for the experienced loss of purchasing power.

Integration of renewables and stronger locational signals

To be able to integrate the vast amounts of new renewables that are needed to achieve decarbonisation, we need to scale up investments in grid and transmission infrastructure. The Nordic TSOs insist that much faster permitting is needed. Setting a maximum time for permitting should be applied at European level, which Member States are to adhere to. This should be coupled with a prioritisation of sufficient resources to ensure the required pace and bandwidth at national permitting authorities. Additionally, TSOs in Europe need to be given stronger mandate for significant grid reinforcement, including cross-border connections.

But grid investments may not be enough to integrate renewables at the pace we need. The consultation asks whether stakeholders see a benefit in a long-term shift of the EU electricity market to more granular locational pricing. The Nordic TSOs believe that there are many benefits to stronger locational signals for the location and dispatch of new generation and demand, as well as sustained and transparent price signals for grid development and flexibility resources.

More granular locational pricing may represent a significant evolution of the electricity market design. Today, the geographical element (bidding zones) of market design is static and reactive, subject to lengthy bidding zone review processes. This may not fit well with an energy system in rapid development. Instead, if market design is to facilitate the transition to net zero as fast and as cost-efficiently as possible, the geographical element may need to be more dynamic and able to adapt to changes of the grid as well as the composition and location of supply and demand.

More granular locational pricing may also prevent that all consumers Europe-wide face a high marginal price set by gas-fired generation. When the market structure appropriately reflects congestions in the grid, electricity prices will in general be lower at locations with abundant production of electricity from renewables. This allows local consumers to reap the benefits of renewables and – at the same time – provide incentives for new electricity intensive industries to locate here. This both reduces the need for grid reinforcements and supports job growth in areas with abundant renewable resources.

We recommend that the European Commission along with relevant stakeholders carefully analyse the potential need for improving locational signals. This analysis could be used as input to a more comprehensive market design reform (e.g., around 2026) aiming at future-proofing the electricity market design for the net zero system.

Alternative flexibility resources to gas to keep the electricity system in balance

A fully carbon neutral energy system, in which electrified consumption and low-carbon generation technologies (primarily renewables) are key drivers, will become increasingly weather-dependent. To ensure adequacy and system resilience in the face of this more complex and volatile mix of both

generation and demand, resources and solutions that can deliver both short-term and long-term flexibility will be required.

The power system will progressively stop relying on the fossil fuel dispatchable generation (primarily gas-fired generation) that provides a significant part of the flexibility and ancillary services today.

The Nordic TSOs believe that to meet the future flexibility needs, we need market mechanisms to ensure the timely deployment of multiple resources of low-carbon technologies that can deliver flexible generation, active consumer participation through demand side response, storage, sector integration and flexible grid use.

Specifically, we believe that demand side resources have great potential to deliver especially short-term flexibility to the system, driven by the electrification of heating, transport and industrial processes. However, this requires consumers to be exposed to granular price signals that reflect the needs of the system at specific times (MTUs) and locations.

The Nordic TSOs therefore encourage policy makers not to compromise the potential of demand side flexibility by forcing consumers on to fixed price contracts, e.g., by using CfDs and PPAs and thereby diminishing consumers' exposure to price signals. To support a more active demand side, we recommend accelerating measures facilitating an active consumer participation, such as the deployment of smart meters. Additionally, experiences from the Nordics during the current energy price crisis show that when exposed to prices, consumers do actively alter consumption patterns by reducing consumption during hours of peak prices and moving consumption to other hours during the day. We need to learn from these and other experiences when considering and designing new rules to support more active demand side participation.