The new shape of the common energy market - the future of European energy

- **The project of a new shape of the EU energy market (Electricity Market Design) was released in mid-March as announced earlier.**
- **The work on the document was preceded by public consultations conducted at the beginning of 2023.**
- **The aim of the regulation is to develop a better harmonized, more flexible, sustainable, and resilient energy market.**
- **The document emphasizes long-term mechanisms for stabilizing prices for consumers, combined with intensive development of RES (PPAs, CfDs).**

Electricity Market Design, a document that was sent for review to many European energy-related organizations in January, is one of the most important initiatives planned by the EC for this year, demonstrating the determination to create a single energy market in Europe.

The price dynamics in the energy and gas markets have significantly increased in the last 4-5 years. Prices for energy and gas have shown hyperbolic increases and decreases since 2021, which has had far-reaching consequences for businesses and consumers in the EU, as well as for the global economy. To reduce the impact of these market dynamics, the European Commission proposed a range of extraordinary measures that most member states have implemented, targeting excessive energy costs.

In parallel with the intervention measures, the European Council called on the Commission to accelerate the structural reform of the electricity market to ensure energy sovereignty for Europe and achieve targeted climate neutrality by 2050. In her annual State of the Union address, President Ursula von der Leyen announced at the end of last year a proposed comprehensive overhaul of the energy market architecture, which is part of the Commission's Work Programme for 2023. At the Energy Council meeting on December 19, 2022, Energy Commissioner Kadri Simson presented to ministers the project for a new energy market architecture. According to the adopted schedule, on January 23, 2023, the European Commission launched public consultations on the reform of the structure of the electricity market in the European Union. The proposed changes aim to protect consumers from unlimited price dynamics, promote access to energy from renewable sources, and make the market resilient to crisis situations.

The European Commission has identified several areas in which changes are possible, including the organization of the electricity market, demand management, the approach to renewable energy sources, and the method of setting the price of carbon emission allowances. The consultations ended on February 13th of this year and based on them, a draft legal act on the new shape of the electricity market was presented.

The previous structure of the electricity market in the European Union

The current structure of the electricity market in the European Union is regulated by the regulation on the internal market for electricity (EU) 2019/943 and the directive on common rules for the internal market in electricity (EU) 2019/944, adopted in May 2019 as part of the "Clean Energy for all

Europeans" package. Both acts came into force in June 2019 and aimed to modernize the EU electricity market, increase competition, and accelerate the integration of renewable energy sources with national power systems.

These regulations introduced several key changes in the EU electricity market, including:

- Activating consumers: the regulations allowed consumers to have a more active role in the electricity market, for example by selling excess energy production to the grid or participating in demand response programs.
- Greater regional cooperation: the creation of regional coordination centers to facilitate cross-border trade and ensure supply security.
- Greater flexibility: allowing market participants to trade electricity in shorter intervals (15 minutes) instead of the previous hourly intervals.
- Greater support for the development of renewable energy sources: increasing the share of energy from renewable sources in the energy mix by introducing more market mechanisms to support their implementation, such as auctions and other forms of unrestricted tenders.

Although the shape of the electricity market in the European Union was established in 2019 and brought about several necessary changes, there were also criticisms raised, including a lack of harmonization of actions, insufficient support for renewable energy sources, management of energy storage, and inadequate emphasis on demand-side flexibility.

The idea of further reforms and modifications to the structure of the electricity market in the European Union was highlighted by the energy crisis, during which Europe needed a more harmonized, flexible, and sustainable energy market.

The reforms currently recommended by the European Commission aim to address the aforementioned shortcomings and build stable and well-integrated energy markets. Importantly, the achievement of the goals of the European Green Deal will not be possible without attracting private investment to support the transformation of the economy towards zero emissions. The new Electricity Market Design aims to create a market that is more flexible, competitive, and consumer-friendly, while also being able to better account for the growing share of renewable energy sources in the EU energy basket.

Increasing the independence of electricity bills from short-term prices of fossil fuels

The current structure of the electricity market is heavily reliant on short-term markets, which are susceptible to the instability of fossil fuel prices. This has resulted in significant price fluctuations for households and businesses. Energy consumers have often been deprived of choice and, due to a lack of access to cheaper electricity from renewable sources or the ability to install their own solar panels, have been subject to the volatility of the market. Short-term markets are important for integrating renewable energy sources and ensuring the appropriate balancing of electricity supply and demand. However, in times of energy crisis, this situation has exacerbated energy poverty while leading to a rapid increase in revenues and profits for low marginal cost producers such as renewable energy and nuclear power.

According to the European Commission, additional instruments and tools are necessary to address the instability of short-term electricity markets. This would create a "buffer" between consumers and short-term markets, providing more predictable electricity bills in the long term. Power purchase

agreements (PPAs) are one type of long-term contract that allow the sale of electricity at an agreed price, which is less susceptible to short-term variability. PPAs aim to generate benefits for both energy consumers, by providing them with a competitively priced and stable electricity supply, and renewable energy producers, by providing them with a source of long-term income, as well as governments by providing an alternative to public funding for renewable energy implementation. However, the share of PPA contracts in the market remains limited mainly to large companies, and the entire segment is developing unevenly in individual EU member states.

The aim of the Commission's regulation on EMD is to increase the share of power purchase agreements (PPAs) in the electricity market and create incentives for their use within the market structure. Additional legal measures are also planned, which could encourage industrial consumers and energy providers to enter the PPA market.

Another type of long-term contract that the European Commission believes could provide a boost to public-supported investment is the contract for difference (CfD). Such contracts also have less exposure to short-term price volatility, and their terms can be determined through a competitive tendering process. In the event of periodic high prices, CfDs can provide member states with additional funds to mitigate the impact on consumers.

The current reform of the electricity market presents an opportunity to include CfDs in the market structure. However, the rate of growth of CfDs should not have a negative impact on the growth of power purchase agreements (PPAs) in the EU, as both instruments are essential legal tools to meet the challenges of renewable energy dissemination. According to the Commission's proposal, CfDs would be mandatory for new renewable energy sources and nuclear energy.

However, in the opinion of the European Commission, increasing the share of renewable energy and its use is crucial for ensuring the security of supply, and affordability, and achieving climate neutrality in Europe by 2050. The accelerated deployment of renewable energy, together with measures to improve energy efficiency, is expected to reduce demand for fossil fuels and ultimately lower energy prices across the EU. At the same time, any regulatory interventions in the structure of the electricity market should maintain and enhance investment incentives, ensuring investor confidence and predictability, while also addressing the economic and social problems associated with high energy prices in Europe. Otherwise, the Green Deal may begin to lose support.

There is also a certain risk associated with the proliferation of member-state particularism. The existence of national support systems for PPA agreements, national CfD contracts, national capacity-building mechanisms, and national flexibility support systems on the one hand allows for solutions to be adapted to local specificities. However, if requirements for coordination between member states are not defined, this may hinder the sustainable development of the common European market.

Alternatives to gas to maintain the balance of the power system

The uncertainty and high prices of gas have been blamed for the energy turmoil in Europe. As part of the new Electricity Market Design, the aim is to equip the market with flexible solutions such as demand management, energy storage, and participation in the market by independent, stable, renewable or low-emission sources. The consultation of the EMD project also aimed to gather information on how to guarantee supply security and self-sufficiency in unforeseen crisis situations while ensuring timely investment in new transmission and generation capacities. The consultation process also examined whether some aspects of exceptional interventions could be transformed into

permanent elements of the energy market structure, which seems dangerous as it could introduce a greater culture of central market control that could harm investment incentives necessary for decarbonizing the electricity sector. On the other hand, the idea of a well-isolated exceptional regime, placed in the law a priori, could help regain trust in the markets. A known, formalized mechanism, triggered only in exceptional circumstances, could reassure market participants that there are no backward changes in stable times and that in exceptional situations, predictable measures can be applied. In this case, it seems that based on the new regulations, member states will have the freedom to apply regulated prices for individual and SME consumers in exceptional situations.

The energy crisis has led to increased energy costs for consumers and industry, resulting in a lowering of living standards and production capacity. It has also had an impact on professional energy companies and trading firms for whom the temporary legal solutions in force in 2023 are a significant burden. It is therefore difficult to determine whether the use of interventionist maximum prices and solidarity charges should be the preferred solution or whether it may be more effective to offer consumers greater opportunities to participate in energy markets (spot and forward) and access long-term contracts for the purchase of energy from renewable sources, coupled with universal education on ways to contract energy, control and plan consumption, and build energy efficiency.

Stronger protection against market manipulation

Regulation 1227/2011 on wholesale market integrity and transparency (REMIT) aims to ensure the integrity of the electricity and natural gas energy markets, fair prices, and the prevention of market abuse. However, in times of high price volatility, market disruptions, and new trading behaviors, there is a risk of negative trading practices. Therefore, the Commission is also focusing on strengthening the safeguards described in REMIT, with a greater emphasis on transparency, monitoring capabilities, cross-border investigations, and enforcement of regulations, in order to support the new structure of the electricity market. It also appears crucial to protect internal markets, whether it be EU-ETS, electricity, or gas trading markets, from strictly speculative actions that are characteristic of financial markets.

What does EMD mean for Poland?

The Union of Entrepreneurs and Employers took advantage of the opportunity to express its opinions on both the policy goals and specific measures through participation in consultations. The official presentation of changes to the electricity market structure occurred in mid-March 2023, although a few days earlier, commentators' references to a leaked draft document began to appear in the public domain.

Electricity Market Design certainly arouses emotions, as it is a document directing European policy towards integration in many other areas of life. And although the general organization and structure of the market remain unchanged (the so-called Merit order), we must realize what a unified energy market in Europe means. Given that the electrification of practically all areas of life is unavoidable, the electrification of transport and heating will have particular significance in shaping a different way of functioning of European economies and lifestyles of Europeans.

Common European energy management will be of crucial importance for the standard of living and the pace of development of EU member states. It is no wonder that cost-effective energy contracting

has come to the fore. Customers will soon have wider access to products with dynamic and fixed prices (for energy/gas purchases). New guidelines on securing trading positions by trading companies will be introduced. The new regulations will also increase the flexibility of the system through demand management (peak shaving, DSR) and energy sharing.

A common energy market is a continuation of the process of unifying Europe, which now, in the face of the war in Ukraine, seems like an absolute necessity if we do not want to lead to a split in the EU. Today, some European countries have decided to merge the command of their armies, which clearly shows the path of functioning and development they have chosen - which just a few years ago would have seemed too bold a step.

A common energy market in Europe, if the project of its reform and unification succeeds, will certainly be characterized by a relatively high level of stability, despite the extremely different energy systems of individual countries.

French nuclear energy is a relatively cheap source of energy, especially since most power plants have been fully amortized, so after overcoming maintenance downtime and strikes in the atomic sector, it will again be able to afford stably low energy prices. Naturally, over time, the technical condition of some reactors and the costs of servicing them will become an issue. Therefore, in recent times, the French renewable energy market has become one of the most dynamically developing in Europe.

In German energy, the level of investment in renewable sources has allowed for a radical reduction in energy prices from these sources. The size of the German economy will not allow for full reliance on renewable sources for a long time. Hence the almost pan-European debate on the justification of phasing out some nuclear power plants. However, without coal-based energy, the German economy cannot function. Yet, after gas prices return to an acceptable level resulting from the real costs of extraction and stabilized supply (independent of Russia), German gas-based energy, along with renewable sources, can gradually replace coal-based energy.

It seems that the target level of 50-60 euros per megawatt-hour is a realistic, stable price level for the common European energy market. What do price levels in a sustainably energy-balanced Scandinavia portend for the rest?

In light of this, what might the future price of energy look like in our domestic market? It seems that by creating a proper mix of renewable, gas, and coal energy, supplemented in the future with nuclear and hydrogen energy, we should be able to meet the challenges in this area.

A major problem could be the flexibility level of our transmission lines. Given the connections between our economy and the European economy, being a part of the European energy market seems unquestionable. However, negotiating optimal conditions for participation in such a market will be extremely difficult for our energy sector.

The dynamics of change in our energy system over the past 30 years have been weak. We have also not achieved significant success in terms of social acceptance of changes in energy. A common energy market requires a complete change in mentality for both producers and consumers. It requires optimizing the work of distribution and transmission systems, operators, and traders. Finally, it requires developing the market for distributed energy and tangible constraints on the work of base sources.

EMD (European Market Design) is a clear signal in which direction European energy is heading. However, in Poland, sometimes problems arise with basic laws relating to the foundations of the common European energy market, such as the wind farm act, amendments to regulations on direct lines, or the introduction of a system of a common use of transmission lines by various sources of dispersed energy (cable pooling).

A common energy market will be created in Europe, and soon. The lack of the possibility to synchronize our energy system with the market-oriented European model may have serious negative consequences for the entire Polish economy and threaten the further development of the country.

The war in Ukraine and the energy problems associated with it throughout Europe have led to greater negotiating flexibility for the European Commission in the energy sector. This is an opportunity for our economy to develop favorable conditions for our country's participation in the entire European energy and heat market.