

Non-Paper
Electricity Market Design

- Lasting ways of Mitigating the Impact of High Gas Prices on Electricity Bills -

Background

Over the last year, electricity prices have been significantly higher than they have been in recent decades, with a severe impact on EU households and the economy. Prices started rising rapidly in summer of 2021 when Russia reduced its supplies to Europe and the world economy picked up after COVID-19 restrictions were eased. Subsequently, Russia’s invasion of Ukraine has led to substantially lower levels of gas delivery to the EU and increased disruptions of gas supply, further driving up energy prices.

As we manage this crisis, our objective is to ensure consumers – both households and companies – can access affordable and secure energy from sustainable and renewable sources both now and in the long term. Market arrangements need to support these objectives, and where necessary, they should be adjusted and improved to do so in line with the rapid increase of renewables in the electricity mix.

The current electricity market design has delivered an efficient, well-integrated market for many years, allowing Europe to reap the economic benefits of a single energy market in the normal market circumstances, ensuring security of supply, increasing socio-economic welfare and driving the decarbonisation process. Cross-border coordination also ensures safer, more reliable and efficient operation of the power system. In its report published in April 2022, ACER has estimated the gain from cross-border electricity trading for European consumers to be about EUR 34 billion in 2021¹ by allowing cheaper electricity to flow in from neighbouring countries when domestic production would be insufficient or more costly or by providing producers a bigger market to sell their production across borders instead of having to curtail their generation. Well integrated energy markets, which continue to attract private investments at a sufficient scale, are also an essential enabler of the European Green Deal objectives and the transition to a climate neutral economy by 2050.

However, in the current crisis leading to sustained high and volatile electricity prices, the EU electricity market has showed certain shortcomings in terms of delivering acceptable outcomes from an economic and social point of view. In spite of a growing share of renewables in the energy mix, consumers (including large industrial consumers, SMEs and households) have faced unsustainably high electricity bills which are to a certain extent directly correlated to the price of fossil fuels, notably gas. Current instruments to protect large industrial consumers, SMEs and households against high prices and excessive volatility have proved to have limits.

Moreover, as a result of the crisis, generators that have low production costs (“inframarginal generators” including eg. renewables, nuclear) have benefited from unexpected surplus profits,

¹ ACER’s Final Assessment of the EU Wholesale electricity market design, April 2022, p.1.

while their minimum profitability has been often protected by public support. On the other hand, as the share of generation with low production cost increases and these technologies set the prices more often, there is a risk that the market will not provide a predictable return on their investment. This could have a chilling effect on the incentives to invest in additional clean generation and flexibility solutions. It is therefore crucial to ensure that any regulatory intervention in the electricity market design preserves the incentives for investments.

Therefore, it would seem appropriate to consider which policy changes could best ensure that the benefits from decarbonisation are brought to consumers such as large industrial consumers, SMEs and households to a greater extent and in a lasting and coordinated way across the EU. This should allow consumers to access electricity from clean energy sources reflecting their real production costs while at the same time ensuring demand responsiveness when prices are driven upwards by expensive technologies such as gas.

Accelerating and Incentivizing the Deployment of Renewables

The ongoing crisis calls for accelerating Europe's clean energy transition as put forward in the RepowerEU Plan. Faster deployment of renewables and further electrification of demand are necessary for a definitive end to the current emergency as they will immediately and structurally reduce demand for fossil fuels and contribute to the decarbonisation objectives in the power, heating and cooling, industry and transport sectors. Thanks to their low operational costs, renewables should have positive impact on energy prices across the EU. Furthermore, the faster deployment of renewable energy will contribute to fossil fuels phase-out and to security of energy supply. In this context, market arrangements should take advantage of the benefits of digitalisation to facilitate consumers collectively investing in and sharing renewable energy and delivering demand response to avoid price peaks, bringing them direct benefits and lowering prices across the entire system.

Through the REPowerEU plan, the Commission has put forward a range of initiatives to support the accelerated deployment of renewable energy and to advance energy system integration. These include the proposal to increase the renewable energy target by 2030 to 45% in the Renewable Energy Directive, legislative changes to accelerate and simplify permitting for renewable energy projects or the obligation to install solar energy in buildings.

The Commission sees the need to accelerate investments in renewables, which are still hindered by the current price volatility and overall market uncertainty, as one of the most important guiding principles of the upcoming market reform.

Scope of the Reform

Against this background, the European Council has called on the Commission "*to speed up work on the structural reform of the electricity market, including an impact assessment, and calls for further progress towards a full Energy Union serving the dual objective of European energy sovereignty and climate neutrality*"². This initiative has been announced by the President of the

² Conclusions of the European Council meeting (20 and 21 October 2022).

Commission during the State of the Union address and included in the Commission work programme 2023³. Building on the May Communication⁴ and on the non-paper outlining Policy Options to Mitigate the Impact of Natural Gas Prices on Electricity Bills sent to the Transport, Telecommunications and Energy (TTE) Council of 25 October 2022, the aim of this non-paper is to provide an update on the ongoing workstream, sketch out possible ideas envisaged for the reform and serve as the basis for the exchange of views.

The Commission considers it important to focus this reform on areas which are urgent for the market to become more resilient and to reduce the impact of gas prices on electricity bills while supporting the energy system evolution towards full decarbonisation by 2050. The aim of such a swift and targeted reform is to provide added value for European citizens and companies already during the ongoing crisis.

At the same time, any modification of the functioning of electricity markets must build on the experiences and challenges witnessed during the current energy crisis to facilitate the ability of the market organisation to respond to the more long-term challenges affecting the European electricity sector in light of rising shares of renewable energy and the progressive drive towards full decarbonisation by 2050.

Therefore, the Commission has just launched a public consultation seeking detailed stakeholder feedback on different policy options covering areas outlined below.

The Commission plans to propose the relevant targeted amendments to the electricity market design already in advance of the March 2023 European Council and calls on co-legislators to advance with the work on this reform as a matter of urgency.

Depending on the outcome of the ongoing public consultation, the Commission considers the following elements to be particularly relevant for the upcoming reform.

1) Pricing Inframarginal Technologies Based on Their True Production Costs

One of the key objectives of the reform is to provide consumers better access to lower cost renewables and other types of inframarginal generators (e.g. nuclear) and more stable prices over longer period. At the same time, the revenues of the producers would more closely reflect their specific production costs and become less dependent on the short-term marginal price in the day-ahead market, which is determined by the price of the last most expensive unit called to meet demand (typically gas).

For new inframarginal generation entering the market, one possible way to achieve this objective could be by means of long-term contracts using different remuneration structures, depending on whether or not the investment in question receives public support.

Where the investment takes place on market conditions, long-term Power Purchase Agreements (PPAs) can contribute to guaranteeing long-term stability in the project's revenues independent of short-term prices on the day-ahead market. Therefore, the consultation will cover ways to

³ COM(2022) 548 final

⁴ COM(2022) 236 final

incentivise generators, suppliers and both industrial and non-industrial consumers to enter into such PPAs and to strengthen the liquidity on forward markets more generally.

Furthermore, where the investment requires the deployment of public support, so-called two-way contracts for difference (CfD) could be envisaged, under which the commercial revenues of certain types of generators are kept within limits in line with the total costs of the relevant technology. The parameters of these contracts-for-difference are typically established by a competitive tender process, allowing support to be channelled to the projects with the lowest expected production costs. In crisis situations like today, the CfDs could provide Member States with additional revenues that could be used to reduce, for example, the impact of high electricity prices on consumers. CfDs can also be designed in a way that generators can combine public support with PPAs.

These long-term remuneration mechanisms would also provide sufficiently stable sources of revenues and predictability to trigger the necessary investments.

The consultation will also cover different options to ensure that the revenues of existing inframarginal generators are not excessive and to make these revenues less dependent on the short-term marginal price. A revenue limitation is already in place temporarily as part of Council Regulation 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices based on Article 122 of the Treaty on the Functioning of the European Union. As part of the reform, the consultation will cover whether certain aspects of this inframarginal revenue limitation should be included in the reform and if yes, how this could be designed. One possible option would be to apply such a revenue limitation on a more permanent and harmonised basis or to activate it specifically in crisis situations.

2) Reducing the Role of Gas in Short-Term Markets

Shifting inframarginal generation to a new revenue structure could change the impact of the existing short-term markets based on marginal pricing. These markets would determine to a much lesser extent the revenues of all generators while continuing to ensure that supply and demand is matched at all times, that the cheapest available electricity is always utilised to meet demand and that cross-border flows and market coupling function smoothly. This role of short-term markets will be increasingly important in light of rising shares of variable renewable generation.

The consultation will cover ways to improve the conditions under which flexibility solutions such as demand response and energy storage compete in the short-term markets. Combined with renewable generation, this could contribute to reducing the role that gas-fired generation plays in the short-term market as a flexible source of generation and will, over time, phase out gas-fired power generation in line with the EU's decarbonisation targets.

3) Better consumer empowerment and protection

The energy crisis has hit consumers hard, particularly the energy poor and vulnerable who were already struggling to afford their essential energy needs. Ensuring access to essential energy, including during crises, is a key objective where market rules have a role to play alongside energy efficiency measures and social policy. The crisis has also hit industry and service sectors increasing

energy costs, particularly for energy intensive industry. This has given rise to cuts in production capacity, temporarily or permanent closures and lay-offs.

The consultation will cover different options for enhancing the current emergency provisions on regulated prices. This could ensure that during an emergency certain consumers have access to a minimum level of electricity at a reasonable price, regardless of the situation in the electricity markets in line with the “two tier” model set out in the Recommendation on the economic policy of the euro area⁵.

The Clean Energy Package contains many provisions that help consumers to control their consumption, manage their budgets, access low-cost electricity from renewables – including by self-consumption. Full and effective implementation will help mitigate the ongoing crisis and improve resilience. However, the consultation will look at a number of possible legislative changes to better empower and protect both households and industrial customers.

Firstly, improving consumer choice by obliging suppliers above a certain size to offer fixed price fixed term contracts covering a fixed share of the average household’s consumption could be considered. This would mirror and balance the already existing obligation to offer dynamic price contracts.

Secondly, the costs of supplier failure could be mitigated by requiring suppliers to be adequately hedged; introducing a formal obligation to appoint a supplier of last resort and clarifying the roles and responsibilities of the appointed supplier and the rights of consumers transferred to the supplier of last resort.

Thirdly, we could take advantage of digitalisation to enable energy sharing and allow consumers to become prosumers using electricity from renewable generation in other locations on their own premises⁶. Another possible measure could be to facilitate the development of offers from suppliers and aggregators to use demand response capabilities of appliances such as heat pumps and electric vehicles.

4) Improving Market Transparency, Surveillance and Integrity

Regulation (EU) 1227/2011 on wholesale market integrity and transparency (REMIT) ensures that consumers and other market participants can have confidence in the integrity of electricity and gas markets, that prices reflect a fair and competitive interplay between supply and demand, and that no profits can be drawn from market abuse.

In times of very high volatility, external actors’ interference, reduced supplies, and new trading behaviours, there is a need to ensure that the REMIT framework is robust enough to detect and to pursue entities engaged in cross-border trading practices. In addition, recent developments on the market and REMIT implementation over last decade have shown that the framework might require

⁵ COM(2022) 782 final)

⁶ Examples include would allow families to share energy among the different members located in different parts of the country; farmers could install renewable generation on one part of their farm and use the energy in their main buildings even if located a distance away; municipalities and housing associations can include off-site energy as part of social housing, directly addressing energy poverty.

an update to keep abreast. Further improvements could be considered to increase transparency, monitoring capacities and ensure more effective investigation and enforcement of potential market abuse cases in the EU to support new electricity market design.

The following four areas for improvements are covered in the consultation:

- alignment of the ACER powers under REMIT with relevant powers under the EU financial market legislation;
- adaptation of the scope of REMIT to current and evolving market circumstances;
- harmonisation of the fines that are imposed under REMIT at national level and the strengthening of the enforcement regime of certain cases with cross-border elements under REMIT.
- Improving the transparency of market surveillance actions by improved communication of the market-related data by ACER, regulators and market operators.

Next Steps

The Commission [has just launched] a public consultation covering the aspects above asking for detailed stakeholder feedback on the available policy options. The feedback received during the consultation will inform the forthcoming legislative proposal accompanied by a staff working document assessing options included in the proposal, which will be put forward early 2023.