



Clean energy for all



NEW ELECTRICITY MARKET DESIGN: A FAIR DEAL FOR CONSUMERS

What is electricity ‘market design’?

Market design is the ‘rulebook’ for energy market players. The rules establish the general principles and technical details on energy market participation, as well as specify rights and responsibilities among market participants. ‘Market design’ is the ‘software’ on which our energy markets run, while the energy infrastructure is the ‘hardware’.

The rules carry consequences for all energy market participants. They also affect the way market participants are remunerated, which drives future investments decisions. Importantly, market design rules also cover the role played by oversight and regulatory bodies in checking that rules are promptly applied and in ensuring market access. Market design rules need to be able to adapt to fast-evolving technologies and new market participants, allowing a clean and secure energy transition to take place.

What is wrong with electricity markets today?

Europe’s electricity system is changing profoundly and rapidly. In the EU the share of electricity produced by renewable sources has soared to 29% and will grow up to 50% in 2030, in line with the 2030 energy and climate goals and with the Paris Agreement.

Much of it will come from variable and less predictable sources like wind and sun. As a result, market rules

should be adapted to facilitate this development, increase the flexibility of the system and ensure security of electricity supplies.

At the wholesale level, we have seen increasing competition and cross-border trade of electricity over the past years. However, in some ways our markets are still under-performing. Electricity does not always flow directly to where it is most needed, and some Member States are resorting to purely national assessments and strategies to minimise risks to security of supply, without taking account of the impact on neighbouring countries.

In most parts of the EU, retail markets suffer from persistently low levels of competition and consumer engagement. Despite technical innovation such as smart grids, smart homes, self-generation and storage, consumers are not sufficiently informed nor incentivised to actively participate in electricity markets. It thus prevents consumers from controlling and managing their energy consumption while saving on their bills and improving their comfort.

What are the new rules for the wholesale market?

The new rules will touch upon a variety of principles and technical provisions with real tangible economic effects. These include, amongst others:

- Short term markets will be made overall more flexible and responsive to the rise in variable renewable generation.
- Wholesale price caps will be removed, making prices reflect the real value of electricity in time and location (scarcity pricing) in order to drive investments towards the flexible assets most needed for the system, including demand-response and storage. More liquid and interconnected markets will increase trade opportunities.
- Dispatch rules will be adapted to the new market reality, creating a level-playing field for larger generation capacities. Rules on priority dispatch will however be maintained for small-scale renewable installations and emerging technologies to ensure their development.
- Grid bottlenecks on the borders will be minimized, among other things by re-investing congestion revenues into the grid.
- The overall electricity system operation by TSOs will see more coordination on a regional level to ensure most optimal utilisation of the grid and better grid stability.
- Better demand participation: remuneration for demand response will be more in line with the flexibility provided by such services, creating a better economic case for distributed resources and for self-generation.
- Consumers will be provided with better information about their energy consumption and their costs through clear electricity bills. Suppliers will have to prominently display basic information on every bill, and report energy costs, network charges and taxes/levies in the same way for clarity.
- All EU electricity consumers will get free-of-charge access to at least one certified energy comparison tool that meets minimum quality standards in order to provide reliable information about the offers provided to consumers.
- Switching conditions will be made easier. All switching related charges will be prohibited, except for early termination fees on fixed term contracts. These must be limited in size and contracts containing them must provide consumers with tangible advantages in return.
- Every consumer will also be entitled to a smart meter equipped with common minimum functionalities. Member States not planning to roll-out smart meters are required to assess the cost-effectiveness of a large-scale smart metering deployment on a regular basis.
- Consumers and communities will be empowered to actively participate in the electricity market and generate their own electricity, consume it or sell it back to the market while taking into account the costs and benefits for the system as a whole.
- Every consumer will be able to offer demand-response and to receive remuneration, directly or through aggregators. Dynamic electricity price contracts reflecting the changing prices on the spot or day-ahead markets will allow consumers to respond to price signals and actively manage their consumption.
- This necessitates the removal of retail price regulation while ensuring the full and appropriate protection of vulnerable consumers. Targeted price regulation such as social tariffs will be permitted

What are the new rules for the retail markets?

Each consumer in Europe should be put at the centre of the Energy Union and reap the benefits of access to more secure, clean and competitive energy. The new rules for the retail electricity markets will include the following:

for a transition period to address the needs of vulnerable consumers until their situation can be addressed by appropriate energy efficiency and social policy measures.

- With the bulk of renewable electricity connected at distribution level, Member States will have to allow and incentivise Distribution System Operators (DSO) to use flexibility services and energy efficiency measures to improve the efficiency of their operations.
- A new EU DSO entity will be created. It will be responsible for putting in place rules on grid management and use and EU-level cooperation with TSOs. It will also work on the integration of renewables, distributed generation, energy storage, demand response and smart metering systems.

Why are there new rules on risk preparedness?

In normal circumstances, well-functioning markets offer the best guarantee for security of supply. However, severe weather conditions, accidents or malicious attacks can pose risks to electricity supply. Where such crisis occurs, the effects are rarely confined to the territory of one Member State.

At the same time, currently, Member States have different approaches when it comes to preventing and managing crisis situations and tend to look at the national context only. This entails risks, is costly, and can undermine the functioning of markets.

The proposed Risk Preparedness regulation will therefore set out common rules to be respected when preparing for and managing crisis situations. It will also require Member States to co-operate and where needed, assist each other, in a regional context. Concretely it offers:

- Common methods for assessing risks related to security of supply

- Common rules on how to prevent and prepare for crisis situations (by requiring Member States to draw up 'risk preparedness plans')
- Common rules for managing crisis situations, to ensure that markets function as long as possible, and to ensure that where there is little electricity left, it goes there where it is most needed
- A common framework for better monitoring security of supply across Europe

What role will market-based prices have in the new market design?

Future electricity markets will be able to send clear price signals and will be free of any public intervention, unless with duly justified exceptions, notably to protect vulnerable and energy poor consumers, for example through the use of social tariffs.

Energy markets with energy prices see lower levels of consumer satisfaction and engagement, poorer consumer choice, fewer opportunities for savings, lower competition and fewer innovative products and services.

Energy price regulation is also the main obstacle to more active consumer in the energy market as it locks consumers out of important market information and limits opportunities for savings. Variable energy prices are the only means for suppliers to communicate to consumers the true cost of supplying energy to them at a given point in time.

Can consumers become energy producers? How will it work in practice?

With the new energy market rules in place all consumers will be able to generate, store and/or sell their own electricity to the market based on retail market conditions and taking into account the costs and benefits for the system as a whole.

Active consumers who decide to generate their own electricity, for example by installing rooftop solar panels, will be able to fully benefit from the market either individually or in cooperatives, like renewable energy communities.

How will vulnerable and energy poor consumers be protected?

The new market rules aim to deliver a better deal for all energy consumers. For vulnerable and energy poor consumers in particular, the objective is to ensure that they are not left behind as most consumers become active market participants.

The new energy market rules oblige Member States to measure and monitor energy poverty and report to the Commission every two years. The Commission will facilitate best practice sharing on how to fight energy poverty, through an Energy Poverty Observatory.

The new rules will also ensure that all customers in arrears with their energy suppliers are fully made aware of their options to avoid disconnection.

Temporary price regulation to protect vulnerable and energy poor consumers, for example through the use of social tariffs, will be further allowed. In the medium term, however, energy efficiency measures proposed under the Energy Efficiency Directive and the Energy Performance of Buildings Directive will ensure that the root causes of energy poverty can be effectively addressed.

What are capacity mechanisms? What's new here?

Capacity mechanisms are support schemes that remunerate generation availability, in addition to any revenue already gained from selling generated electricity on the market. Their primary objective is to guarantee that future capacity is made available, thus

ensuring security of supply. So far, such mechanisms have however often neglected the availability of generation capacity available across the borders, thus leading to higher than needed capacity with higher than necessary costs.

The Market Design Initiative introduces a wider regional and European aspect first into the assessment of capacity needs and seeks to better coordinate national capacity mechanisms.

Under the new rules, Member States should also set transparent and verifiable adequacy targets, having the freedom to choose their desired level of security of supply.

The new rules on capacity mechanisms will complement existing state aid guidelines by creating a European framework and concrete rules for cross-border participation and lead to the integration of capacity markets. This new legal framework will facilitate State aid control by the Commission.

What role will demand response play in the new market design?

Demand response means allowing consumers to adapt their energy usage to different energy prices throughout the day. This could mean receiving a payment from an energy service company to turn down your heating system in order to stabilise the grid during peak time. Or it could mean access to cheaper energy via dynamic price contracts and smart meters when wind farms and solar panels are producing plenty of electricity.

New technologies like smart homes, smart appliances and smart meters will enable consumers to manage their energy consumption and offer demand-response. In combination with electricity supply contracts with dynamic prices, they will be able to directly benefit from the market. The new market rules entitle consumers to request both a smart meter and a dynamic price contract from their supplier.

They will also have the possibility to engage with an aggregator, who can pool their flexible demand and consumption. The new rules facilitate the framework for aggregators to operate.

Demand-response allows consumers to generate electricity savings, additional revenue streams and to lower their electricity bills. It also helps save the environment by helping us better integrate variable renewable energy generation like wind and solar, and rely less on fossil fuel plants that switch on when electricity prices get higher.

What role will storage play?

Storage is one amongst several fast-advancing technologies whose contribution to the efficient working of our electricity system cannot be underestimated. From

a system-wide perspective, storage is one amongst key technologies that enable the grid to be more flexible, as they can counter-balance peaks and drops in demand and supply – provided the remuneration gives an incentive to do so.

Storage will therefore need to benefit from appropriate pricing to have its flexibility and usage adequately remunerated. By introducing scarcity pricing, the current initiative wants to give due credit to such technology. By strengthening the price signal, we are in practice allowing storage technologies to take advantage of instantaneous market remuneration, whilst creating a case for longer-term investment in the technology.