COMPROMISE AMENDMENT COVERING ALL AMENDMENTS

Tabled by EPP, S&D, Renew & Greens

2023/0077 (COD)

Proposal for a

REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Regulations (EU) 2019/943 and (EU) 2019/942 as well as Directives (EU) 2018/2001 and (EU) 2019/944 to improve the Union’s electricity market design

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 194(2) thereof,

Having regard to the proposal from the European Commission,

After transmission of the draft legislative act to the national parliaments,

Having regard to the opinion of the European Economic and Social Committee,

Having regard to the opinion of the Committee of the Regions,

Acting in accordance with the ordinary legislative procedure,

Whereas:

(1) Very high prices and volatility in electricity markets have been observed since September 2021. As set out by the European Agency for the Cooperation of Energy Regulators (‘ACER’) in its April 2022 assessment of EU wholesale electricity market design¹, this is mainly a consequence of the gas supply crisis, the high price of gas (Greens 189), which is used as an input to generate electricity. Additional factors, such as maintenance, corrosion problems or outages experienced in several nuclear reactors as well as low hydropower output further amplified the increase in electricity prices (Rapp 1, RE 188, Greens 189, Left 190).

(2) The escalation of the Russian military aggression against Ukraine, a Contracting Party of the Energy Community, and related international sanctions since February 2022 have disrupted global energy markets, exacerbated the problem of high gas prices, and have had significant knock-on impacts on electricity prices. The unjustified Russian invasion of Ukraine has also caused uncertainty on the supply of other fossil energy

¹ European Union Agency for the Cooperation of Energy Regulators, ACER’s Final Assessment of the EU Wholesale Electricity Market Design, April 2022.
commodities, such as hard coal and crude oil, used by power-generating installations. This has resulted in substantial additional increases in the volatility of price levels of electricity. (Greens 198)

(3) In response to this situation, the Communication on Energy Prices presented by the Commission in October 2021 contained a toolbox of measures that the EU and its Member States may use to address the immediate impact of high energy prices on households and businesses (including income support, tax breaks, gas savings, and energy (Greens 199) savings and storage measures) and to strengthen resilience against future price shocks. In its Communication of 8 March 2022 entitled ‘REPowerEU: Joint European Action for more affordable, secure and sustainable energy’ the Commission outlined a series of additional measures to strengthen the toolbox and to respond to rising energy prices. On 23 March 2022, the Commission also established a temporary State Aid regime to allow certain subsidies to soften the impact of high energy prices.3

(4) On 18 May 2022 the Commission presented the REPowerEU plan4 that introduced additional measures focusing on energy savings, diversification of energy supplies, increased energy efficiency targets (Rapp 2) and accelerated roll-out of renewable energy aiming at ending the Union’s dependency on Russian fossil fuels, including a proposal to increase the Union’s 2030 target for renewables to 45%. Furthermore, the Communication on Short-Term Energy Market Interventions and Long-Term Improvements to the Electricity Market Design5, in addition to setting out additional short-term measures to tackle high energy prices identified potential areas for improving the electricity market design and announced the intention to assess these areas with a view to change the legislative framework.

(5) To address urgently the price crisis and security concerns and to tackle the price hikes for citizens, and based on a series of Commission proposals, the Union adopted a strong gas storage regime, effective demand reduction measures for gas and electricity, price limiting regimes to avoid windfall profits in both gas and electricity markets and measures to accelerate the permit-granting procedures for renewable energy installations.

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2 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - REPowerEU: Joint European Action for more affordable, secure and sustainable energy, COM/2022/108 final
3 Communication from the Commission Temporary Crisis Framework for State Aid measures to support the economy following the aggression against Ukraine by Russia C 131 I/01, C/2022/1890.
4 Communication from the Commission to the European Parliament, the European Council, the Council, the European Economic and Social Committee and the Committee of the Regions - REPowerEU Plan, COM(2022)230.
5 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions - Short-Term Energy Market Interventions and Long Term Improvements to the Electricity Market Design – a course for action, COM(2022) 236 final.
8 Council Regulation (EU) 2022/1854 of 6 October 2022 on an emergency intervention to address high energy prices, OJ L 261.
A well-integrated market which builds on the Clean Energy for all Europeans Package adopted in 2018 and 2019 should allow the Union to reap the economic benefits of a single energy market in all normal market circumstances, including during electricity prices crisis. (Rapp 3) Ensuring security of supply and sustaining the decarbonisation process to achieve the climate neutrality objective (Greens 203). Cross-border interconnectivity also ensures safer, more reliable and efficient operation of the power system, and better resilience to short-term price shocks. (Rapp 3) To this end, the Commission should consider how to improve monitoring and enforcement of the 2019 Electricity Market Regulations, including the obligation to make 70% of interconnector capacity available for cross-border trade. Furthermore, the Commission should consider to increase the 70% obligation, and limit possible derogations, to make the electricity market fit for an energy system primarily based on renewable energy, which merits a need for more and better interconnection to sustain a high security of supply (RE 202).

Strengthening the energy internal market and achieving the climate and energy transition objectives require a substantial upgrade of the EU’s electricity network to be able to host substantial increases of renewable capacity, variability on generation amounts, changing electricity flow patterns across Europe and new demand such as electric vehicles and heat pumps. Investments in grids are crucial to the well-functioning of the internal market, to the integration of renewable energy, to support security of supply and to effectively connect energy supply and demand in a context where thoselocate further apart, and the deliverance and Union climate and energy targets require efficient resource use within and across borders. Already by 2030, the Union requires EUR 584 billion investments to cover the needs in electricity grids alone, both transmission and distribution. The challenge is particularly notable at distribution level, given the growing amount of renewable generation capacity connected to distribution grids, which will connect most new renewable projects, and the developments towards the electrification and smartening of energy demand. A failure to expand, upgrade and smarten the distribution grids accordingly could put at risk delivering on the Union’s renewable targets, delaying the connection to the network of new renewable capacities; could hamper the possibility for consumers to become active players of the energy transition; and ultimately delay the completion of the internal energy market. (EPP 204)

An interconnected European electricity network is essential for European security of supply and competitiveness, as well as for better achieving the decarbonisation targets to which the Union has committed to facilitate affordable, safe and sustainable energy. Therefore, any reform of the Union’s electricity market should contribute to a more integrated European electricity network. It is particularly important to make sure that each Member State has in place interconnection capacity of at least 15% to

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allow that electricity produced on its territory can be transported across its borders to neighbouring countries. This is particularly important for the Iberian Peninsula and for other European regions which need to extend their grid interconnections, but where progress is still slow and challenged by several aspects. (EPP 206) Therefore, the Union and Member States should strengthen their cooperation to remove barriers, facilitate financing and accelerate all procedures to ensure that the minimum 15% electricity interconnection target set out in Article 4, point (d)(1), of Regulation (EU) 2018/1999 is met. (Rapp 3, EPP 206)

(6c) Building and upgrading the Union’s electricity network and connectivity infrastructure, such as the projects of common European interest (PCIs) as established by the framework concerning the Trans-European Networks for Energy, including through submarine cables, can contribute to connect remote areas and islands, thus providing adequate connectivity to all Union citizens. An appropriate investment in revitalising isolated territories, such as islands and rural areas, can bring major opportunities to citizens and enterprises to participate in the energy transition and the digital transformation of the Union. Special consideration should be given to the European outermost regions, in accordance with Article 349 of the Treaty on the Functioning of the Union, which recognises their specific constraints and provides for the adoption of specific measures in their regard. (EPP 208)

(7) The current electricity market design has also helped the emergence of new and innovative products, services and measures on retail electricity markets, supporting energy efficiency and renewable energy uptake and enhancing choice so as to help consumers reduce their energy bills also through small-scale generation installations and emerging services for providing demand response. Building on and seizing the potential of the digitalisation of the energy system, such as active participation by consumers, should be a key element of our future electricity markets and systems. At the same time, there is a need to respect consumer choices, shield household consumers from high prices, manipulation and abuse (Greens 211) and allow consumers to benefit from a variety of contract offers. Energy system integration should be intended as the planning and operation of the energy system as a whole, across multiple energy carriers, infrastructures, and consumption sectors, by creating stronger links between them, in synergy with each other and supported by digitalisation with the objective of delivering affordable, reliable and resource-efficient energy services, at the least possible cost for society. (EPP 209)

(8) In the context of the energy crisis, the current electricity market design has however also revealed a number of important shortcomings and unexpected consequences (Rapp 4) linked to the impact of high and volatile fossil fuel prices on short-term electricity markets, which expose households and companies undertakings to significant price spikes with effects on their electricity bills.

(9) A faster deployment of renewable energy and clean flexible technologies constitutes the most sustainable and cost-effective way of structurally reducing the demand for fossil fuels for electricity generation and for direct consumption through electrification and energy system integration. Thanks to their low operational costs, renewable sources can positively impact electricity prices across the Union and reduce direct (Greens 214) consumption of fossil fuels.

(10) The changes to the electricity market design should ensure that the benefits from rising renewable power deployment, and the energy transition as a whole, are brought to consumers, including the most vulnerable ones, and ultimately, shield them from energy
crises and avoid more households falling into energy poverty trap. These should mitigate the impact of high fossil fuel prices, notably that of gas, on electricity prices, aiming to allow households and companies to reap the benefits of affordable and secure energy from sustainable renewable and low carbon sources in the longer term, as well as the role of energy efficient solutions in reducing overall energy costs, which may reduce the need for power grid and generation capacity expansion (EPP 215).

(11) The reform of the electricity market design should aim to achieve affordable and competitive electricity prices for all consumers (Rapp 5). As such, it should benefit not just household consumers but also the competitiveness of the Union’s industries by facilitating their possibilities to make the clean tech investments they require to meet their net zero transition paths. The energy transition in the Union needs to be supported by a strong clean technology manufacturing basis. These reforms will help industry to secure their access to affordable and continuous supply of clean power and heat (EPP 217) and support the affordable electrification of industry, including on-site renewables and high efficiency cogeneration uptake, and the Union’s position as a global leader in terms of research and innovation in clean energy technologies.

(12) Well-functioning and efficient short-term markets are a key tool for the integration of renewable energy and flexibility sources in the market and facilitate energy system integration in a cost-effective manner.

(12a) As the Court of Auditors concluded in its Special Report 03/2023, entitled ‘Internal electricity market integration’, that the internal electricity market was hindered by its regulatory approach and its weak governance framework, leading to delays and an incomplete market surveillance system. Therefore, the Commission should assess the effectiveness of the current structure of the electricity market and the functioning of the short-term market; the development of electricity generation capacity and quality of service delivered to final consumers in each Member State and the suitability of the current Union legal and financing framework on distribution grids to deliver on the Union’s renewable and internal energy market objectives. The Commission should also assess any inefficiencies in the internal electricity market and consider measures on European trading platforms for primary and secondary long-term markets, including measures to create liquidity and transparency, such as requirements for producers and customers to contract minimum amount of products in public, centralised auctions to provide liquidity.

(13) Intrady markets are particularly important for the integration of variable renewable energy sources in the electricity system at the least cost as they give the possibility to market participants to trade shortages or surplus of electricity closer to the time of delivery. Since variable renewable energy generators are only able to accurately estimate their production close to the delivery time, it is crucial for them to have a maximum of trading opportunities via access to a liquid market as close as possible to the time of delivery of the electricity.

(14) It is therefore important for the intraday markets to adapt to the participation of variable renewable energy technologies such as solar and wind as well as to the participation of demand side response and energy storage. The liquidity of the intraday markets should be improved with the sharing of the order books between market operators within a bidding zone, also when the cross-zonal capacities are set to zero or after the gate closure time of the intraday market. In order to ensure that order books are shared between NEMOs in the day-ahead and intraday timeframes, NEMOS should submit all orders to the single day-ahead and intraday coupling, and should not organize the
trading of day-ahead and intraday products, or products with similar characteristics, outside the single day-ahead and intraday coupling. To address the inherent risk of discrimination in the trading of day-ahead and intraday products inside and outside the single day-ahead and intraday coupling, this obligation should apply to NEMOs and to undertakings which directly or indirectly exercise control or any right over a NEMO (Rapp 7). Furthermore, the gate closure time of the intraday market should be set closer to the time of delivery to maximize the opportunities for market participants to trade shortages and surplus of electricity and contribute to better integrating variable renewables in the electricity system provided that this measure does not have negative impacts on the security of the national electricity system, cost-efficiency, greenhouse gas emissions and facilitates the integration of renewable energy. (Rapp 7; EPP 222; Greens 223, 224)

(15) In addition, the short-term electricity markets should ensure that small-scale flexibility service providers can participate by lowering the minimum bid size.

(16) To ensure ensuring the efficient integration of electricity generated from variable renewable energy sources and to reduce reducing the need for fossil-fuel based electricity generation is an objective of the Union, the urgent need for which has been demonstrated in this crisis. Building on lessons learned, ACER should perform an assessment about the possibility for in times when there is high demand for electricity combined with low levels of electricity generation from variable renewable energy sources, it should be possible for transmission system operators to design procure a peak shaving product in order to achieve a reduction of electricity demand and price during peak hours enabling demand response to contribute to decreasing peaks of consumption in the electricity system at specific hours of the day. The peak shaving product should contribute to maximize the integration of electricity produced from renewable sources into the system by shifting the electricity consumption to moments of the day with higher renewable electricity generation. As the peak shaving product aims to reduce and shift the electricity consumption, the scope of this product should be limited to demand side response. The procurement of the peak shaving product should take place in such a way that it does not overlap with the activation of balancing products which aim at maintaining the frequency of the electricity system stable. In order to verify volumes of activated demand reduction, the transmission system operator should use a baseline reflecting the expected electricity consumption without the activation of the peak shaving product. The assessment should take into consideration the need for these products not to distort the functioning of the electricity markets and not to cause a redirection of demand response services towards peak shaving products. The assessment should also take into consideration specific national developments and consider the possibility of procuring these products under normal circumstances and during electricity price crisis. In light of the assessment, the Commission should, where appropriate, submit a legislative proposal to amend this Regulation in order to introduce peak shaving products outside electricity price crisis situations.

(17) In order to be able to actively participate in the electricity markets and to provide their flexibility, consumers are progressively equipped with smart metering systems. However, in a number of Member States the roll-out of smart metering systems is still slow so it is imperative to make sure that Member States improve the conditions for the installation of smart metering systems, with the objective of reaching a full coverage as soon as possible (EPP 232). However, consumers should have the right to use or request the use of a dedicated measurement device, (Rapp 9) so that they
can engage with their flexible loads in demand response, independently from being already equipped with a smart metering system. In addition to the use of data from smart metering systems (RE 231), in those instances where smart metering systems are not yet installed and in instances where smart metering systems do not provide for the sufficient level of data granularity, transmission and distribution system operators, upon customer consent, (Greens 235) should be able to use data from dedicated metering measurement devices for the observability and settlement of flexibility services such as demand response and energy storage. Enabling the use of data from dedicated metering measurement devices for observability and settlement should facilitate the active participation of the consumers in the market and the development of their demand response. The use of data from these dedicated metering measurement devices should be accompanied by quality requirements relating to the data. (Rapp 9)

(18) This Regulation establishes a legal basis for processing of personal data in compliance with Article 6(1)(c) GDPR. Member States should ensure that all personal data protection principles and obligations laid down in the GDPR are met, including on data minimisation. Where the objective of this Directive can be achieved without processing of personal data, providers should rely on anonymised and aggregated data.

(19) Consumers and suppliers need effective and efficient forward markets to cover their long-term price exposure and decrease the dependence on short-term prices. To ensure that energy customers all over the EU can fully benefit from the advantages of integrated electricity markets and competition across the Union, the functioning of the Union’s electricity forward market should be improved via the establishment of regional virtual hubs with a view assessment and implementation of possible feasible solutions in a reasonable period within the current market set-up, with the aim (EPP 239) to overcome the existing market fragmentation and the low liquidity experienced in many bidding zones. These improvements could for instance be more frequent auctions or other maturities to be considered and would require a proper assessment (EPP 239). At the same time, an assessment on the impact of the establishment of virtual hubs for the forward market on the functioning of the electricity markets should be undertaken by the Commission, including on the virtual hubs’ geographical scope as non-physical regions covering more than one bidding zone and the methodology for the calculation of the reference prices for the regional virtual hubs should cover multiple bidding zones while ensuring an adequate price correlation. Some bidding zones may not be covered by a virtual hub in terms of contributing to the hub reference price. However, market participants from these bidding zones should still be able to hedge through a virtual hub.

(20) Virtual hubs should reflect the aggregated price of multiple bidding zones and provide a reference price, which should be used by market operators to offer forward hedging products. To that extent, virtual hubs should not be understood as entities arranging or executing transactions. The regional virtual hubs, by providing a reference price index, should enable the pooling of liquidity and provide better hedging opportunities to market participants.

(21) To enhance the possibilities of market participants for hedging, the role of the single allocation platform established in accordance with Commission Regulation (EU) 2016/1719 should be expanded. The single allocation platform should act as an entity offering allocation and facilitating trading of financial long-term transmission rights on behalf of the transmission system operators between the different bidding zones and, where relevant, the regional virtual hubs. The orders submitted by market
participants for financial transmission rights should be matched by a simultaneous allocation of long term cross zonal capacity. Such matching and allocation should be performed in accordance with Commission Regulation 2016/1719 and (EPP 249) on a regular and more frequent (RE 250) basis, to ensure enough liquidity and, hence, efficient hedging possibilities to market participants. The long-term transmission rights should be issued with frequent different (RE 250) maturities (ranging from month ahead to at least three years ahead), in order to be aligned with the typical hedging time horizon of market participants. The single allocation platform should be subject to monitoring and enforcement to ensure that it performs its tasks properly.

(22) Network tariffs should incentivise transmission and distribution system operators to use flexibility services through further developing innovative solutions to optimise the existing grid and to procure flexibility services, in particular demand response or storage. For this purpose, network tariffs should be designed so as to take into account the operational and capital expenditures of system operators or an efficient combination of both so that they can operate the electricity system cost-efficiently. This would further contribute to integrating renewables at the least cost for the electricity system and enable final customers to value their flexibility solutions.

(22a) The energy transition requires a rapid acceleration in the deployment of renewables, onshore and offshore, and electrified demand promoting sector coupling. Such a prompt ramp-up of installations, together with the inherent complexities of managing an electricity system with variable and distributed resources, is posing substantial challenges to the grids. In general, the transmission grid will incorporate large amounts of onshore and offshore renewable capacities and transmit the electricity to demand areas, further interconnect Member States and enable flows from distributed renewables to other demand areas. The distribution grid will incorporate most new onshore renewable capacities and electrified and smart household demand. National regulatory authorities will play a central role in ensuring that enough investment is provided for the necessary grid development, expansion and reinforcement. Regulatory authorities should promote the utilisation of anticipatory investments, encouraging the acceleration of grid development to meet the accelerated deployment of renewable generation and smart electrified demand, such as electric vehicles, charging infrastructure and heat pumps deployment, where applicable, while taking careful consideration of the electricity network needs reflected in national or local development plans for energy, electric transport and heating sectors. This may be the case in particular for designated renewables acceleration areas where anticipatory investments will be instrumental in ensuring that grids become enablers and not bottlenecks. Network tariffs should be designed to provide the right incentives to system operators by combining a timely recognition of traditional investments in physical networks and adequate returns, with a flexible reflection of operational cost. Any obstacle in national regulation to the necessary and efficient investments should be abolished. (Rapp 13, EPP 259, RE 590, Left 254)

(23) Offshore renewable energy sources, such as offshore wind, ocean energy and floating photovoltaic, will play an instrumental role in building a power system largely based on renewables and in ensuring climate neutrality by 2050. There are, however, substantial obstacles to their wider and efficient deployment preventing the massive scale up needed to achieve those objectives. Similar obstacles could arise for other offshore technologies in the future. These obstacles include investment risks associated with the unique topographical situation of offshore hybrid projects connected to more than one market. In order to reduce investment risk for these
offshore project developers, *instruments such as power purchase agreements or contracts for differences may be issued.* To ensure that the projects in an offshore bidding zone have full market access to the surrounding markets, transmission system operators should guarantee access of the offshore project to the capacity of the respective hybrid interconnector for all market time units. If the available transmission capacities agreed in the connection agreement or in a critical network element are reduced to the extent that the full amount of electricity generation that the offshore project would have otherwise been able to export cannot be delivered to the market, *and subject to a coordinated decision of the Member States concerned,* the transmission system operator or operators responsible for the need to limit the capacity should, in future, be enabled to partly (Greens 261) compensate the offshore project operator commensurately by using the excess congestion income earned additionally on the interconnector due to the capacity restriction. This compensation should only be related to the production capability available to the market, which may be weather dependent and excludes the outage and maintenance operations of the offshore project. *This compensation cannot be considered to cover all risks that the offshore generator will face but only those associated with the unique topographical situation of offshore hybrid projects connected to more than one market.* The details, including the conditions under which the measure may expire, *as well as a methodology for calculation of this compensation, are intended to should* be defined in an implementing Regulation.

(24) In the day-ahead wholesale market, the power plants with lower marginal costs are dispatched first, but the price received by all market participants is set by the last plant needed to cover the demand, which is the plant with the highest marginal costs, when the markets clear. In this context, the energy crisis has shown that a surge in the price of gas and hard coal can translate into exceptional and lasting increases of the prices at which the gas and coal-fired generation facilities bid in the day-ahead wholesale market. That in turn has led to exceptionally high prices in the day-ahead market across the Union, as gas and coal-fired generation facilities are often the plants with the highest marginal costs needed to meet the demand for electricity.

(25) Given the role of the price in the day-ahead market as a reference for the price in other wholesale electricity markets, and the fact that all market participants receive the clearing price, the technologies with significantly lower marginal costs have consistently recorded high revenues.

(25a) _The reform of the electricity market design should protect all consumers, households, small and medium-sized enterprises and industry from high price shocks. Therefore, on the basis of the lessons learned, the Commission should also assess options for the introduction of a temporary relief valve mechanism in view of the experience with those mechanisms at international level and of the evolution and new developments in the Union electricity market._ (Rapp 15)

(26) To reach the Union’s decarbonisation targets and the objectives set out in REPowerEU to become more energy independent, the Union needs to accelerate the deployment of renewables at a much faster pace. In view of the investment needs required to achieve these goals, the market should ensure that a long-term price signal is established.

(27) In this framework, Member States should strive to create the right market conditions for long-term market-based instruments, such as power purchase agreements (‘PPAs’). PPAs are bilateral purchase agreements between producers and buyers of electricity. They provide long-term price stability for the customer and the necessary certainty for
the producer to take the investment decision. Nevertheless, only a handful of Member States have active PPA markets and buyers are typically limited to large companies, not least because PPAs face a set of barriers, in particular the difficulty to cover the risk of payment default from the buyer in these long-term agreements. Member States should take into consideration the need to create a dynamic PPA market when setting the policies to achieve the energy decarbonisation objectives set out in their integrated national energy and climate plans. Regulatory unpredictability, instability and retroactivity would undermine the ability of PPAs to contribute to the clean energy transition and energy independence. (RE 265)

(28) According to Article 15(8) of Directive (EU) 2018/2001 of the European Parliament and of the Council, Member States are to assess the regulatory and administrative barriers to long-term renewables PPAs, and shall remove unjustified barriers to, and promote the uptake of, such agreements. In addition, Member States are to describe policies and measures facilitating the uptake of renewables PPAs in their integrated national energy and climate plans. Without prejudice to that obligation to report on the regulatory context affecting the PPA market, Member States should ensure that instruments to reduce the financial risks associated to the buyer defaulting on its long-term payment obligations in the framework of PPAs are accessible to companies that face entry barriers to the PPA market and are not in financial difficulty in line with Articles 107 and 108 TFEU. Member States could decide to set up a guarantee scheme at market prices. Member States may put in place such instruments to make hedging products in the forward market accessible to customers that face entry barriers to the forward market (RE 268). Member States should include provisions to avoid lowering the liquidity in the electricity markets, such as by using financial PPAs. Member States should not provide support to PPAs that purchase generation from fossil fuels. While the default approach should be non-discrimination between consumers, Member States could decide to target these instruments to specific categories of consumers, applying objective and non-discriminatory criteria. However, where a Member State determines that there are sufficiently developed markets for PPAs to allow effective competition, public guarantee schemes should only support the purchase of new renewable generation. In this framework, and in light of the increased Union renewable energy target and the urgent need to significantly accelerate the current pace of deployment of renewables, Member States should take into account the potential role of instruments provided at Union level, for instance by the European Investment Bank (‘EIB’) or other Union-level facilities. Moreover, the Commission should take additional measures to achieve the renewables target which could include instruments at Union level such as European wide auctions, in particular of additional Union backed guarantees for PPAs and contracts for differences, to support the deployment of additional renewable energy capacities corresponding to at least the additional 2.5% to attain the Union target of 45%.

(29) Member States have at their disposal several instruments to support the development of PPA markets when designing and allocating public support. Allowing renewable energy project developers participating in a public support tender to reserve a share of the generation for sale through a PPA would contribute to nurture and grow PPA markets. In addition, as part of these tender evaluation Member States should endeavour to apply criteria to incentivise the access to the PPA market for actors that face entry barriers, such as small and medium-sized enterprises (‘SMEs’) giving preference to bidders presenting a commitment to sign a PPA for part of the project’s generation from one or several potential buyers that face difficulties to access the PPA market.
To facilitate the access to and the uptake of PPAs, voluntary standardised contracts designed to simplify procedures and match the risk profile of different size customers should be developed. (Rapp 19)

(29a) To gain a better knowledge of the evolution of a growing market, such as the PPA market, new tools are needed. Therefore, a database at Union level should be set up to facilitate the collection of relevant information on the PPAs concluded in the Union. That database should function as a digital platform and should be used to facilitate the Agency’s and national regulatory authorities’ monitoring of relevant information on the PPAs signed in the Union. Market participants who have reported records of PPAs should not be subject to double reporting obligations relating to those contracts.

(30) Where Member States decide to support publicly financed new investments (“direct price support schemes”) in low carbon, non-fossil fuel electricity generation to achieve the Union’s decarbonisation objectives, those schemes should be structured by way of two-way contracts for difference or equivalent schemes achieving the same goals such as to include, in addition to a revenue guarantee, an upward limitation of the market revenues of the generation assets concerned. Such schemes should be allocated through a voluntary, competitive, open, transparent, non-discriminatory, and cost-effective procedure, in accordance with State Aid guidelines, preventing undue distortions to the efficient functioning of the electricity markets (EPP 276, RE 277). New investments for the generation of electricity should include investments in new power generating facilities, investments aimed at repowering existing power-generating facilities, investments aimed at or extending existing power-generating facilities if the increase of power generation capacity is substantial (EPP 276). However, in the case of investments aimed at extending existing power-generating facilities, two-way contract for differences should be strictly limited to the share of the total power-generation capacity that reflects the costs of the new investment in relation to the total investment costs of the power-generating facility. (Rapp 21)

(31) Such two-way contracts for difference would ensure that revenues of producers stemming from new investments in electricity generation which benefit from public support become more independent from the volatile prices of fossil fuels-based generation which typically sets the price in the day-ahead market.

(32) However, to the extent that the limitation to set out direct price support schemes in the form of two-way contracts for difference narrows down the types of direct price support schemes that Member States can adopt as regards renewable energy sources, it should be limited to low carbon, non-fossil fuel technologies, with low and stable operational costs and to technologies which typically do not provide flexibility to the electricity system, while excluding technologies that are at early stages of their market deployment. This is necessary to ensure that the economic viability of generation technologies with high marginal costs is not jeopardised and to maintain the incentives of the technologies which can offer flexibility to the electricity system to bid in the electricity market based on their opportunity costs. In addition, the limitation to set out direct price support schemes in the form of two-way contracts for difference or equivalent schemes achieving the same goals should not apply to electricity from the renewable sources listed in Article 19b(2) of this Regulation with more than 1 MW installed capacity, and more than 6 MW where the project is a citizen energy community or renewable energy community and to emerging technologies for which other types of direct price support schemes may be better placed to incentivise their
uptake. The limitation should be without prejudice to the possible exemption for small-scale installations and demonstration projects pursuant to Article 4 (3) of (EU) 2018/2001 of the European Parliament and of the Council and consider the specificities of renewable energy communities in accordance with Article 22 (7) of that Directive.

(33) In view of the need to provide regulatory certainty of producers, the obligation for Member States to apply direct price support schemes for the production of electricity in the form of two-way contracts for difference should apply only to new investments for the generation of electricity from the sources specified in the recital above whose contracts are concluded as of one year after the date of entry into force of this Regulation.

(34) Thanks to the upward limitation of the market revenues direct price support schemes in the form of two-way contracts for difference should provide an additional source of revenues for Member States in periods of high energy prices. To further mitigate the impact of high electricity prices on the energy bills of consumers, Member States should ensure that the revenues collected from producers subject to direct price support schemes in the form of two-way contracts for difference are passed on to all final electricity customers, including households, SMEs and industrial consumers with particular attention to vulnerable customers and those affected by or at risk of energy poverty, based on their consumption. Member states could also dedicate the revenues to compensate the cost of the support schemes, to support investments for the energy transition of the electricity sector or to cover energy-intensive industries at risk of carbon leakage if they demonstrate significant emission reductions through their decarbonisation efforts for reaching climate neutrality. In this case, those energy-intensive industries should be requested to include a transformation plan that sets out key elements on their pathway unless they already have one in place. The revenues should be distributed according to a fair, transparent and non-discriminatory methodology. The redistribution of revenues should be done in a way that ensures that consumers are still to some extent exposed to the price signal, so that they reduce their consumption when the prices are high, or shift it to periods of lower prices (which are typically periods with a higher share of RES production). Member States should ensure that the level playing-field and competition between the different suppliers is not affected by the redistribution of revenues to the final electricity consumers.

(35) Furthermore, Member States should ensure that the direct price support schemes, irrespective of their form, do not undermine the efficient, competitive and liquid functioning of the electricity markets, preserving the incentives of producers to react to market signals, including stop generating when electricity prices are below their operational costs, and of final customers to reduce consumption when electricity prices are high. Member States should ensure that support schemes do not constitute a barrier for the development of commercial contracts such as PPAs. The two-way contracts for difference should also take into account in their design locational criteria; be designed so that the support granted to the energy projects are not revised in a way that negatively affects the rights conferred thereunder or undermines the economic viability of projects that already benefit from support; ensure transparency in the conditions and preserve the incentives for the generating facility to operate and participate efficiently in the electricity markets; should not receive support for production in any period in which the market value of that production is negative; should minimise their possible negative impact on the liquidity of forward markets, and should include penalty clauses applicable in the case of the early termination of
the contract, while complying with the principles set out in Article 4(2) and 4(3), first and third subparagraphs, of Directive (EU) 2018/2001.

(36) Thus, two-way contracts for difference and power purchase agreements play complementary roles in advancing the energy transition and bringing the benefits of renewables and low carbon energy to consumers. Subject to the requirements set out in the present Regulation, Member States should be free to decide which instruments they use to achieve their decarbonisation objectives. Through PPAs, private investors contribute to additional renewable and low carbon energy deployment while locking low and stable electricity prices over the long-term. Likewise, through two-way contracts for difference, the same objective is achieved by public entities on behalf of consumers. Both instruments are necessary to achieve the Union’s decarbonisation targets through renewable and low carbon energy deployment, while bringing forward the benefits of low-cost electricity generation for consumers.

(37) The accelerated deployment of renewables necessitates a growing availability of flexibility solutions to ensure their integration to the grid and to enable the electricity system and grid to adjust to the variability of electricity generation and consumption across different time horizons. Regulatory authorities should periodically assess the need for flexibility at national level including flexibility needs in a future net-zero in the electricity system based on the input of transmission and distribution system operators, after conducting a public consultation. ACER should periodically assess and draw up a report on flexibility needs at Union level. The assessment of the flexibility needs of the electricity system should take into account all existing and planned investments (including existing assets that are not yet connected to the grid) on sources of flexibility such as flexible electricity generation, interconnectors, demand side response, energy storage or the production of renewable fuels, in view of the need to decarbonise the energy system. On this basis, Member States should define a indicative separate quantifiable national objectives for non-fossil flexibility such as demand side response and energy storage which should also be reflected in their integrated national energy and climate plans. In light of those plans, the Commission should assess the consistency between the Member States’ national targets and draw up a Union strategy on demand response and energy storage consistent with the Union's 2030 targets for energy and climate.

(37a) The most necessary deployment of variable renewable energy generation will reach its full potential only with the deployment of additional energy storage. The future energy system will need more flexibility, stability and reliability to achieve the objectives of Regulation (EU) 2021/1119 and the European Green Deal. Energy storage can play a crucial role in the current and future energy system. It can help decarbonise the economy and increase the efficiency and security of energy supply by providing flexibility, stability and reliability. Energy storage can also lower electricity prices during peak times, reduce electricity price fluctuations and empower consumers to adapt their energy consumption to prices and their needs. (Rapp 26)

(38) To achieve the national objective for non-fossil flexibility such as demand side response and energy storage investment needs, Member States can design or redesign capacity mechanisms in order to create a green and flexible capacity mechanism. Member States that apply a capacity mechanism in line with the existing rules should consider promoting the participation of non-fossil flexibility such as demand side response and energy storage by introducing additional criteria or features in the design. (Rapp 27)
To support environmental protection objectives the CO2 emissions’ limit, set out in Article 22(4) of Regulation (EU) 2019/943 of the European Parliament and of the Council, should be seen as an upper limit. Therefore, Member States could set technical performance standards and CO2 emissions’ limits that restrict participation in capacity mechanisms to flexible, fossil-free technologies in full alignment with the Guidelines on State aid for climate, environmental protection and energy\textsuperscript{11} which encourage Member States to introduce green criteria in capacity mechanisms.

In addition, if Member States do not apply a capacity mechanism or if the additional criteria or features in the design of their capacity mechanism are insufficient to achieve national objective for demand response and energy storage investment needs they could apply flexibility support schemes consisting of payments for the available capacity of non-fossil flexibility such as demand side response and energy storage. (Rapp 28)

The energy crisis has demonstrated the need for flexible back-up generation, a need which is more acute with an increasing share of renewables in the electricity mix or when the level of interconnections in a Member State is not sufficiently developed. Therefore, in order to facilitate the integration of an increasing share of renewable generation into the electricity system, capacity mechanisms should not be considered as an element of last resort where that is determined following a resource adequacy assessment. (Rapp 29).

The connection of new generation and demand installations, in particular renewable energy plants, often faces delays in grid connection procedures. One of the reasons for such delays is the lack of available grid capacity at the location chosen by the investor, which implies the need for grid extensions or reinforcements to connect the installations to the system in a safe manner. A new requirement for electricity system operators, both at transmission and distribution levels, to publish and update information on the grid capacity available in their areas of operation would contribute to decision-making by investors on the basis of information of grid capacity availability within the system and thus to the required acceleration in the deployment of renewable energy.

Furthermore, to tackle the problem of lengthy reply times on requests for connection to the grid, transmission and distribution system operators should provide clear and transparent information to system users about the status and treatment of their connection requests. Transmission and distribution system operators should endeavour to provide such information within a period of three months from the submission of the request. Transmission and distribution system operators should also cooperate with each other to provide clear and transparent information on the level of self-consumption capacity installed. (Rapp 30)

During the energy crisis, consumers have been exposed to extremely volatile wholesale energy prices and had limited opportunities to engage in the energy market. Consequently, many households, have been facing financial difficulties when and have been unable to pay paying their bills. Vulnerable consumers and the energy poor are the hardest hit\textsuperscript{28}, but middle-income households have also been exposed to such financial difficulties. High energy prices also have a negative impact on consumer health, well-being, social inclusion and quality of life. High energy prices discourage people from adequately heating or cooling their homes, and living in such conditions increases health risks, such as those linked to cardiac and respiratory problems (Rapp

\textsuperscript{11} Communication from the Commission – Guidelines on State aid for climate, environmental protection and energy 2022 (OJ C 80, 18.2.2022, p. 1).
It is therefore important to update consumer rights and protections, allowing consumers to benefit from the energy transition, decouple their electricity bills from short-term price movements on energy markets and rebalance the risk between suppliers and consumers.

Consumers should have access to a wide range of offers so that they can choose a contract according to their needs. However, suppliers have reduced their offers, fixed-price contracts have become scarce, and the choice of offers has become limited. Consumers should always have the possibility to opt for an affordable fixed price and fixed term contract to ensure a stable price over the duration of the contract (RE 331) and suppliers should not unilaterally modify the terms and conditions of a contract or terminate it (Rapp 32) before such contract expires.

When suppliers (Rapp 33) do not ensure that their electricity portfolio is sufficiently hedged, changes in wholesale electricity prices can leave them financially at risk and, result in their failure, passing on costs to consumers and other network users. Hence, it should be ensured that Member States perform regular stress tests to assess whether suppliers are appropriately hedged when offering fixed price contracts. In case hedging opportunities are insufficient (EPP), an appropriate hedging strategy should be put in place and take into account the suppliers' access to its own generation and its capitalisation as well as its exposure to changes in wholesale market prices, the size of the supplier and the market structure (Rapp 33).

Consumers should be able to choose the supplier which offers them the price and service which best suits their needs. Advances in metering and sub-metering technology combined with information and communication technology mean that it is now technically possible to have multiple suppliers for a single premises. If they wish so, customers should be able to use these possibilities to choose a separate supplier, in particular (Rapp 34) for electricity to power appliances such as heat pumps or electric vehicles which have a particularly high consumption or which also have the capability to shift their electricity consumption automatically in response to price signals. To that end, customers should be allowed to have more than one metering and billing point covered by the single connection point for their premises. Some smart metering systems may directly cover more than one metering point and therefore enable customers to have more than one electricity supply contract at the same time (Rapp 34). Moreover, with fast-responding dedicated metering measurement devices which are attached to or embedded in appliances with flexible, controllable loads, final customers can participate in other incentive-based demand response schemes that provide flexibility services on the electricity market and to transmission and distribution system operators. Overall, such arrangements should contribute to the increased uptake of demand response and to consumer empowerment allowing them to have more control over their energy use and bills, while providing to the electricity system additional flexibility in order to cope with demand and supply fluctuations.

Due to the increasing complexity of energy offers and different marketing practices, consumers have often difficulties to fully understand what they sign up to. In particular, there is a lack of clarity on how the price is set, the conditions for the renewal of the contract, the consequences of terminating a contract or the reasons for changing conditions by the supplier. Therefore, the key information on energy offers should be provided to consumers by suppliers or market participants engaged in aggregation in a short and easily understandable manner prior to signing the contract.
To ensure continuity of supply for consumers in case of supplier failure, Member States should be obliged to appoint suppliers of last resort which may be treated as the provider of universal service. That supplier might be the sales division of a vertically integrated undertaking which also performs distribution functions, provided that it meets the unbundling requirements of Article 35 of Directive (EU) 2019/944 of the European Parliament and of the Council. However, this does not imply an obligation of Member States to supply at a certain fixed minimum price.

To ensure continuity of supply for consumers in case of supplier failure, Member States have not already appointed a supplier of last resort, they should be obliged to appoint suppliers of last resort which may be treated as the provider of universal service. That supplier might be the sales division of a vertically integrated undertaking which also performs distribution functions, provided that it meets the unbundling requirements of Article 35 of Directive (EU) 2019/944 of the European Parliament and of the Council. However, this does not imply an obligation of Member States to supply at a certain fixed minimum price. (Rapp 35)

Energy sharing can create resilience against the effects of high and volatile wholesale market prices on consumers’ energy bills, empowers a wider group of consumers that do not otherwise have the option of becoming an active customer due to financial or spatial constraints, such as energy poor and vulnerable consumers, and leads to increased uptake of renewable energy by mobilising additional private capital investments and diversifying remuneration pathways. With the integration of appropriate price signals and storage facilities, electricity sharing can help lay the foundation to help tap into the flexibility potential of smaller consumers.

Active customers that own, lease or rent a storage or generation facility should have the right to share excess production and empower other consumers to become active, or to share the renewable energy generated or stored by jointly leased, rented or owned facilities, either directly or through a third-party facilitator provided that the renewable energy generation facility owned by the third party does not exceed 6 MW capacity. Energy sharing arrangements are either based on private contractual agreement between active customers or organised through a legal entity. A legal entity that incorporates the criteria of a renewable energy community as defined in Directive (EU) 2018/2001 of the European Parliament and of the Council or a citizen energy community as defined in Directive (EU) 2019/944 of the European Parliament and of the Council can share with their members electricity generated from facilities they have in full ownership. The protection and empowerment framework for energy sharing should pay particular attention to energy poor and vulnerable consumers.

Energy sharing operationalises the collective consumption of self-generated or stored electricity injected into the grid by more than one jointly acting active customers. Member States should put in place the appropriate IT infrastructure to allow for the administrative matching within a certain timeframe of consumption with self-generated or stored renewable energy for the purpose of calculating the energy component of the energy bill. The output of these facilities should be distributed among the aggregated consumer load profiles based on static, variable or dynamic calculation methods that can be pre-defined or agreed upon by the active customers. Active customers who participate in energy sharing should be financially responsible for the imbalances that they cause in the electricity system, whether directly or through a delegated party pursuant to Article 5 of Regulation (EU) 2019/943 (Rapp 37, Left 342). All consumer rights and obligations laid down in Directive (EU) 2019/944 should apply to final
customers participating in energy sharing schemes. However, households with an installed capacity up to 10.8 kW for single households and up to 100 kW for multi-apartment blocks should not be required to comply with supplier obligations. (Rapp 37, Left 342)

(52) Vulnerable customers should be adequately protected from electricity disconnections and should, as well, not be put in a position that forces them to disconnect. Member States should therefore prohibit electricity disconnections of vulnerable household customers and customers affected by or at risk of energy poverty, while also ensuring that disconnections are prohibited during ongoing judicial or out-of-court disputes between supplier and customers for a period of eight weeks. Member States should also complement those rights with the adoption of specific measures for the winter and summer seasons, to enable household customers to help manage their consumption and avoid high settlement bills. The role of suppliers and all relevant national authorities to identify appropriate measures, in both the short and the long-term, which should be made available to vulnerable customers to manage their energy use and costs remain essential, including by means of close cooperation with social security systems.

(53) Public interventions in price setting for the supply of electricity constitute, in principle, a market-distortive measure. Such interventions may therefore only be carried out as public service obligations and are subject to specific conditions. Under this Directive regulated prices are possible for energy poor and vulnerable households, including below costs, and, as a transition measure, for households and micro-enterprises. In times of crisis, when wholesale and retail electricity prices increase significantly, and this is having a negative impact on the wider economy, Member States should be allowed to extend, temporarily, the application of regulated prices also to SMEs. For both households and SMEs, Member States should be temporarily allowed to lower the electricity prices and (Rapp 39) to set regulated prices below costs as long as this does not create distortion between suppliers and suppliers are compensated for the costs of supplying below cost. However, it needs to be ensured that such price regulation is targeted and does not create incentives to increase consumption. Hence, such price regulation should be limited to 80% of median household consumption for households, 100% for vulnerable household customers and 70% of the previous year’s consumption for SMEs. The Commission should determine when such an electricity price crisis exists and consequently when this possibility becomes applicable. The Commission should also specify the validity of that determination, during which the temporary extension of regulated prices applies, which may be for up to one year. To the extent that any of the measures envisaged by the present Regulation constitute State aid, the provisions concerning such measures are without prejudice to the application of Articles 107 and 108 TFEU. In any event, the declaration of such a regional or Union-wide electricity price crisis should ensure a level playing field across all Member States affected by the decision so that the internal market is not unduly distorted. (Rapp 39)

(54) The measures envisaged by the present Regulation are also without prejudice to the application of Directive 2014/65/EU, Regulation (EU) 2016/1011 and Regulation (EU) 648/2012.


(56) Since the objectives of this Regulation cannot be sufficiently achieved by the Member States, but can rather be better achieved at Union level, the Union may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty on European Union. In accordance with the principle of proportionality, as set out in that Article, this Regulation does not go beyond what is necessary to achieve those objectives.
EMD REGULATION

Text: COM proposal

Article 1

Subject matter and scope

This Regulation aims to:

(a) set the basis for an efficient achievement of the objectives of the Energy Union and the goal to achieve climate neutrality by 2050 at the latest, (Greens 378) in particular the climate and energy framework for 2030 by enabling market signals to be delivered for increased efficiency, higher share of renewable energy sources, security of supply, flexibility, sustainability, decarbonisation and innovation;

(b) set fundamental principles for well-functioning, integrated electricity markets, which allow all resource providers and electricity customers non-discriminatory market access, enable the development of forward electricity markets to allow suppliers and consumers to hedge or protect themselves against the risk of future volatility in electricity prices, empower and protect (Greens 364, Left 379) consumers, ensure a level playing field for distributed renewable energy installations owned by citizens and energy communities, ensure competitiveness on the global market, enhance security of supply and (Rapp 40) flexibility through as well as demand response, energy storage, energy sharing (Rapp 40) and other non-fossil flexibility solutions, ensure energy efficiency, and facilitate aggregation of distributed demand and supply, and enable market and sectoral integration and market-based remuneration of electricity generated from renewable sources;

(ba) consider the electricity sector as a key element of integrated energy system planning and operation of the energy system as a whole, across multiple energy carriers, with the objective of delivering affordable, reliable and resource-efficient energy services, at the least possible cost for society; (EPP 367)

(c) set fair rules for cross-border exchanges in electricity, thus enhancing competition within the internal market for electricity, taking into account the particular characteristics of national and regional markets, including the establishment of a compensation mechanism for cross-border flows of electricity, the setting of harmonised principles on cross-border transmission charges and the allocation of available capacities of interconnections between national transmission systems;

(d) facilitate the emergence of a well-functioning and transparent wholesale market, contributing to a high level of security of electricity supply, and provide for mechanisms to harmonise the rules for cross-border exchanges in electricity;

(e) support long-term investments in renewable energy generation, flexibility, including energy storage, (Rapp 41) and enable consumers to make their energy bills affordable and (Greens 369) less dependent from fluctuations of short-term electricity market prices, in particular fossil fuel prices in the medium to long-term;
(ea) set a framework for the adoption of measures to address electricity price crisis; (Rapp 42)

(eb) ensure that sufficient investments are made in the grid and storage capacities to meet the challenges posed by the increasing share of intermittent electricity generation and the overall increase in electricity use. (Left 375)
Article 2
Definitions

The following definitions apply:

(1) ‘interconnector’ means a transmission line which crosses or spans a border between Member States and which connects the national transmission systems of the Member States;

(2) ‘regulatory authority’ means a regulatory authority designated by each Member State pursuant to Article 57(1) of Directive (EU) 2019/944;

(3) ‘cross-border flow’ means a physical flow of electricity on a transmission network of a Member State that results from the impact of the activity of producers, customers, or both, outside that Member State on its transmission network;

(4) ‘congestion’ means a situation in which all requests from market participants to trade between network areas cannot be accommodated because they would significantly affect the physical flows on network elements which cannot accommodate those flows;

(5) ‘new interconnector’ means an interconnector not completed by 4 August 2003;

(6) ‘structural congestion’ means congestion in the transmission system that is capable of being unambiguously defined, is predictable, is geographically stable over time, and frequently reoccurs under normal electricity system conditions;

(7) ‘market operator’ means an entity that provides a service whereby the offers to sell electricity are matched with bids to buy electricity;

(8) ‘nominated electricity market operator’ or ‘NEMO’ means a market operator designated by the competent authority to carry out tasks related to single day-ahead or single intraday coupling;

(9) ‘value of lost load’ means an estimation in euro/MWh, of the maximum electricity price that customers are willing to pay to avoid an outage;

(10) ‘balancing’ means all actions and processes, in all timelines, through which transmission system operators ensure, in an ongoing manner, maintenance of the system frequency within a predefined stability range and compliance with the amount of reserves needed with respect to the required quality;

(11) ‘balancing energy’ means energy used by transmission system operators to carry out balancing;

(12) ‘balancing service provider’ means a market participant providing either or both balancing energy and balancing capacity to transmission system operators;
(13) ‘balancing capacity’ means a volume of capacity that a balancing service provider has agreed to hold and in respect to which the balancing service provider has agreed to submit bids for a corresponding volume of balancing energy to the transmission system operator for the duration of the contract;

(14) ‘balance responsible party’ means a market participant or its chosen representative responsible for its imbalances in the electricity market;

(15) ‘imbalance settlement period’ means the time unit for which the imbalance of the balance responsible parties is calculated;

(16) ‘imbalance price’ means the price, be it positive, zero or negative, in each imbalance settlement period for an imbalance in each direction;

(17) ‘imbalance price area’ means the area in which an imbalance price is calculated;

(18) ‘prequalification process’ means the process to verify the compliance of a provider of balancing capacity with the requirements set by the transmission system operators;

(19) ‘reserve capacity’ means the amount of frequency containment reserves, frequency restoration reserves or replacement reserves that needs to be available to the transmission system operator;

(20) ‘priority dispatch’ means, with regard to the self-dispatch model, the dispatch of power plants on the basis of criteria which are different from the economic order of bids and, with regard to the central dispatch model, the dispatch of power plants on the basis of criteria which are different from the economic order of bids and from network constraints, giving priority to the dispatch of particular generation technologies;

(21) ‘capacity calculation region’ means the geographic area in which the coordinated capacity calculation is applied;

(22) ‘capacity mechanism’ means a temporary measure to ensure the achievement of the necessary level of resource adequacy by remunerating resources for their availability, excluding measures relating to ancillary services or congestion management;

(23) ‘high-efficiency cogeneration’ means cogeneration which meets the criteria laid down in Annex II to Directive 2012/27/EU of the European Parliament and of the Council (16);

(24) ‘demonstration project’ means a project which demonstrates a technology as a first of its kind in the Union and represents a significant innovation that goes well beyond the state of the art;

(25) ‘market participant’ means a natural or legal person who buys, sells or generates electricity, who is engaged in aggregation or who is an operator of demand response or energy storage services, including through the placing of orders to trade, in one or more electricity markets, including in balancing energy markets;
‘redispatching’ means a measure, including curtailment, that is activated by one or more transmission system operators or distribution system operators by altering the generation, load pattern, or both, in order to change physical flows in the electricity system and relieve a physical congestion or otherwise ensure system security;

‘countertrading’ means a cross-zonal exchange initiated by system operators between two bidding zones to relieve physical congestion;

‘power-generating facility’ means a facility that converts primary energy into electrical energy and which consists of one or more power-generating modules connected to a network;

‘central dispatching model’ means a scheduling and dispatching model where the generation schedules and consumption schedules as well as dispatching of power-generating facilities and demand facilities, in reference to dispatchable facilities, are determined by a transmission system operator within an integrated scheduling process;

‘self-dispatch model’ means a scheduling and dispatching model where the generation schedules and consumption schedules as well as dispatching of power-generating facilities and demand facilities are determined by the scheduling agents of those facilities;

‘standard balancing product’ means a harmonised balancing product defined by all transmission system operators for the exchange of balancing services;

‘specific balancing product’ means a balancing product different from a standard balancing product;

‘delegated operator’ means an entity to whom specific tasks or obligations entrusted to a transmission system operator or nominated electricity market operator under this Regulation or other Union legal acts have been delegated by that transmission system operator or NEMO or have been assigned by a Member State or regulatory authority;


‘customer’ means a customer as defined in point (1) of Article 2 of Directive (EU) 2019/944;

‘final customer’ means final customer as defined in point (3) of Article 2 of Directive (EU) 2019/944;

‘wholesale customer’ means a wholesale customer as defined in point (2) of Article 2 of Directive (EU) 2019/944;

‘household customer’ means household customer as defined in point (4) of Article 2 of Directive (EU) 2019/944;

‘small enterprise’ means small enterprise as defined in point (7) of Article 2 of Directive (EU) 2019/944;
(39) ‘active customer’ means active customer as defined in point (8) of Article 2 of Directive (EU) 2019/944;

(40) ‘electricity markets’ means electricity markets as defined in point (9) of Article 2 of Directive (EU) 2019/944;

(41) ‘supply’ means supply as defined in point (12) of Article 2 of Directive (EU) 2019/944;

(42) ‘electricity supply contract’ means electricity supply contract as defined in point (13) of Article 2 of Directive (EU) 2019/944;

(43) ‘aggregation’ means aggregation as defined in point (18) of Article 2 of Directive (EU) 2019/944;

(44) ‘demand response’ means demand response as defined in point (20) of Article 2 of Directive (EU) 2019/944;

(45) ‘smart metering system’ means smart metering system as defined in point (23) of Article 2 of Directive (EU) 2019/944;

(46) ‘interoperability’ means interoperability as defined in point (24) of Article 2 of Directive (EU) 2019/944;

(47) ‘distribution’ means distribution as defined in point (28) of Article 2 of Directive (EU) 2019/944;

(48) ‘distribution system operator’ means distribution system operator as defined in point (29) of Article 2 of Directive (EU) 2019/944;

(49) ‘energy efficiency’ means energy efficiency as defined in point (30) of Article 2 of Directive (EU) 2019/944;

(50) ‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable sources as defined in point (31) of Article 2 of Directive (EU) 2019/944;

(51) ‘distributed generation’ means distributed generation as defined in point (32) of Article 2 of Directive (EU) 2019/944;

(52) ‘transmission’ means transmission as defined in point (34) of Article 2 of Directive (EU) 2019/944;

(53) ‘transmission system operator’ means transmission system operator as defined in point (35) of Article 2 of Directive (EU) 2019/944;

(54) ‘system user’ means system user as defined in point (36) of Article 2 of Directive (EU) 2019/944;

(55) ‘generation’ means generation as defined in point (37) of Article 2 of Directive (EU) 2019/944;
(56) ‘producer’ means producer as defined in point (38) of Article 2 of Directive (EU) 2019/944;

(57) ‘interconnected system’ means interconnected system as defined in point (40) of Article 2 of Directive (EU) 2019/944;

(58) ‘small isolated system’ means small isolated system as defined in point (42) of Article 2 of Directive (EU) 2019/944;

(59) ‘small connected system’ means small connected system as defined in point (43) of Article 2 of Directive (EU) 2019/944;

(60) ‘ancillary service’ means ancillary service as defined in point (48) of Article 2 of Directive (EU) 2019/944;

(61) ‘non-frequency ancillary service’ means non-frequency ancillary service as defined in point (49) of Article 2 of Directive (EU) 2019/944;

(62) ‘energy storage’ means energy storage as defined in point (59) of Article 2 of Directive (EU) 2019/944;

(63) ‘regional coordination centre’ means regional coordination centre established pursuant to Article 35 of this Regulation;

(64) ‘wholesale energy market’ means wholesale energy market as defined in point (6) of Article 2 of Regulation (EU) No 1227/2011 of the European Parliament and of the Council (17);

(65) ‘bidding zone’ means the largest geographical area within which market participants are able to exchange energy without capacity allocation;

(66) ‘capacity allocation’ means the attribution of cross-zonal capacity;

(67) ‘control area’ means a coherent part of the interconnected system, operated by a single system operator and shall include connected physical loads and/or generation units if any;

(68) ‘coordinated net transmission capacity’ means a capacity calculation method based on the principle of assessing and defining ex ante a maximum energy exchange between adjacent bidding zones;

(69) ‘critical network element’ means a network element either within a bidding zone or between bidding zones taken into account in the capacity calculation process, limiting the amount of power that can be exchanged;

(70) ‘cross-zonal capacity’ means the capability of the interconnected system to accommodate energy transfer between bidding zones;

(71) ‘generation unit’ means a single electricity generator belonging to a production unit;
‘peak hour’ means an individual hour of the day, based on the forecasts of transmission system operators and, where applicable, nominated electricity market operators, with the highest electricity consumption combined with a low level of electricity generated from renewable energy sources, taking cross-zonal exchanges into account;

‘peak shaving’ means the ability of market participants to reduce electricity consumption from the grid (Rapp 44) at peak hours determined by the transmission system operator;

‘peak shaving product’ means a market-based product through which market participants can provide peak shaving to the transmission system operators;

‘virtual hub’ means a non-physical region covering more than one bidding zone for which an index price is set in application of a methodology;

‘two-way contract for difference’ means a contract signed between a power generating facility operator and a counterpart, usually a public entity, that provides both minimum remuneration and a limit to excess remuneration; the contract is designed to preserve incentives for the generating facility to operate and participate efficiently in the electricity markets, and complies with the principles set out in Article 4(2) and Article 4(3), first and third subparagraphs, of Directive (EU) 2018/2001;

‘power purchase agreement’ or ‘PPA’ means a contract under which a natural or legal person agrees to purchase electricity from an electricity producer on a market basis;

‘market revenue’ means realised income an electricity producer receives in exchange for the sale and delivery of electricity, or for the provision of other services related to the energy system, (Rapp 47, Left 407) in the Union, regardless of the contractual form in which such exchange takes place, including power purchase agreements and other hedging operations against fluctuations in the wholesale electricity market, (Rapp 47, Left 407) and excluding any support granted by Member States;

‘settlement’ means a payment that is made and received between counterparties, against delivery and receipt of electricity where applicable, in fulfilment of the counterparties’ respective obligations pursuant to one or more clearing transactions; (Rapp 49)

‘dedicated metering measurement device’ means a device linked, attached to or embedded in an asset that sells provides demand response or flexibility services on the electricity market or to transmission and distribution system operators and that allows measuring the volume of demand response and flexibility services delivered;

‘power control system (PCS)’ means a system or device which electronically limits or controls the steady state alternating currents, or direct currents, to a programmable limit or level; (Rapp 51, RE 416)

‘flexible connection agreement’ means a set of predetermined rules and requirements for expeditiously interconnecting electrical capacity to the grid, that includes an agreement
to limit and control the import and export of electricity from and to the transmission and distribution network; (Rapp 52)

(80) ‘flexibility’ means the ability of an electricity system to adjust to the variability of generation and consumption patterns and grid availability, across relevant market timeframes.

(80a) ‘intraday market operator’ means any NEMO, power exchange or other entity which collects bids and offers for intraday products, or products with essentially the same characteristics as intraday products, from market participants before or after the intraday cross-zonal gate closure time. (EPP 417)

(80b) ‘intraday market timeframe’ means the timeframe of the electricity market from single intraday coupling gate opening time until the latest point in time when intraday trading is allowed in a given bidding zone including time periods after the intraday cross-zonal gate closure time; (RE 420)

(80c) ‘day-ahead market timeframe’ means the timeframe of the electricity market from the single day-ahead coupling gate opening time until the time when the single day-ahead coupling results are published; (RE 422)
Article 7

Day-ahead and intraday markets

1. Transmission system operators and NEMOs, or an entity designated by them, shall jointly organise the management of the integrated day-ahead and intraday markets in accordance with Regulation (EU) 2015/1222. Transmission system operators and NEMOs shall cooperate at Union level or, where more appropriate, at a regional level in order to maximise the efficiency and effectiveness of Union electricity day-ahead and intraday trading. The obligation to cooperate shall be without prejudice to the application of Union competition law. In their functions relating to electricity trading, transmission system operators and NEMOs shall be subject to regulatory oversight by the regulatory authorities pursuant to Article 59 of Directive (EU) 2019/944 and ACER pursuant to Articles 4 and 8 of Regulation (EU) 2019/942 and the transparency obligations and effective supervision against market manipulation laid down in Regulation ... [REMIT II] (Rapp 54).

2. Day-ahead and intraday markets shall:

   (a) be organised in such a way as to be non-discriminatory;

   (b) maximise the ability of all market participants to manage imbalances;

   (c) maximise the opportunities for all market participants to participate in cross-zonal and intra-zonal trade in a non-discriminatory way and as close as possible to real time across and within all bidding zones;

   (d) provide prices that reflect market fundamentals, including the real time value of energy, on which market participants are able to rely when agreeing on longer-term hedging products;

   (e) ensure operational security while allowing for maximum use of transmission capacity;

   (f) be transparent and, where applicable, provide information by generation units (Rapp 55) while at the same time protecting the confidentiality of commercially sensitive information and ensuring trading occurs in an anonymous manner;

   (g) make no distinction between trades made within a bidding zone and across bidding zones; and
(h) be organised in such a way as to ensure that all markets participants are able to access the market individually or through aggregation.
Article 7a

Peak shaving product

1. By December 2024, the Agency, after consulting ENTSO for Electricity, and the EU DSO Entity (EPP 449), shall perform an assessment about the possibility for transmission system operators to procure peak shaving products in order to achieve a reduction of electricity demand and price (Rapp 57) during peak hours. The assessment shall take into consideration the need for these products not to distort the functioning of the electricity markets, and not to cause a redirection of demand response services towards peak shaving products. The assessment shall also take into consideration specific national developments (EPP 450) and consider the possibility of procuring these products under normal circumstances and during electricity price crisis declared in accordance with Article 66a of Directive... [revised EMD Directive]. The Commission shall, where appropriate, submit a legislative proposal to amend this Regulation in order to introduce peak shaving products outside electricity price crisis situations (Rapp 65).

2. Where the Commission has adopted a decision pursuant to Article 66a of Directive... [revised EMD Directive] and taking into account the assessment made by the Agency as referred to in paragraph 1, or existing assessments until the latter is carried out, transmission system operators may, during the application period of that decision, procure peak shaving products in order to achieve a reduction of electricity demand and price in peak hours.

When system operators seek seeking to procure a peak shaving product, they shall submit a proposal setting out the dimensioning and conditions for the procurement and activation (Rapp 58 / Greens 461 / EPP 1350) of the peak shaving product to the regulatory authority of the Member State concerned. The proposal of the relevant transmission system operator shall comply with the following requirements:

(a) the dimensioning of the peak shaving product shall be based on an analysis of the need for an additional service to ensure security of supply. The analysis shall take into account the market impact of the peak shaving product (Rapp 59, Greens 464), its expected costs and benefits (Rapp 59) and a reliability standard or objective and transparent grid stability criteria approved by the regulatory authority. The dimensioning shall take into account the forecast of demand, the forecast of electricity generated from renewable energy sources and the forecast of other sources of flexibility in the system, such as energy storage (Rapp 59). The dimensioning of the peak shaving product shall be transparent, done in consultation with market participants and (EPP 1350) limited to ensure that the forecasted costs do not exceed the (Rapp 59, EPP 1350, Greens 464) expected benefits of the product do not exceed the forecasted costs and do not increase the greenhouse gas emissions of the energy system (Rapp 59, Greens 464) at the moment of its activation (Greens 464);

(b) the procurement of a peak shaving product shall be based on objective, market-based (Rapp 60, EPP 1350, Greens 470), transparent, non-discriminatory criteria and be limited to demand response. It shall not exclude participating assets from accessing other markets;

(c) the procurement of the peak shaving product shall take place using a competitive bidding process, which can be continuous (EPP 1095), with selection based on the lowest cost
of meeting pre-defined technical and environmental criteria, and shall allow the effective participation of small consumers, directly or through aggregation (Rapp 61);

\[(ca)\] the minimum bid size shall be 100 kW including through aggregation; (Greens 473)

(d) contracts for a peak shaving product shall not be concluded more than \textit{a week-ahead} (Rapp 62, EPP 1350) two days before its activation, and the contracting period shall be no longer than one day (Rapp 62, EPP 1350);

(e) the activation of the peak shaving product shall not reduce cross-zonal capacity;

(f) the activation of the peak shaving product shall take place after the closure of the day-ahead market and before the start of the balancing market;

(g) the peak shaving product shall not imply starting generation located behind the metering point.

3. The actual reduction of consumption resulting from the activation of a peak shaving product shall be measured against a baseline, reflecting the expected electricity consumption without the activation of the peak shaving product. \textit{Where a Transmission system operator decides to procure a peak shaving product in accordance with paragraph 2, it shall develop a baseline methodology in consultation with market participants and in compliance with Article 23 of Directive (EU) 2019/944 and the procedures set out in the network code adopted pursuant to Article 59 and submit it to the regulatory authority for their approval. Where the proposal does not meet the requirements under this paragraph, the regulatory authority shall request the system operator to amend the proposal.}

4. Regulatory authorities shall approve the proposal of the transmission system operators seeking to procure a peak shaving product and the baseline methodology submitted in accordance with paragraphs 2 and 3 or shall request the transmission system operators to amend the proposal where it does not meet the requirements set out in these paragraphs.
1. **Without prejudice to Article 19 of Directive 2019/944**, (RE 503) Member States shall allow customers and market participants, including independent aggregators (EPP 502), with explicit consent from the owners and users (Rapp 67, Greens 501), transmission system operators and distribution system operators to **have access and** (SD 67, Greens 501, ECR 506) use data from dedicated metering measurement (Rapp 67) devices for the observability, settlement and flexibility services **and energy sharing** (Rapp 67, RE 503, Greens 501), including from demand response and energy (Rapp 67, ECR 506) storage systems in accordance with the applicable Union data protection and privacy rules, notably under Regulation (EU) 2016/679 (Rapp 67, Greens 512). The use of those data in an aggregated and anonymized form for research purposes shall be allowed (EPP 502).

2. Member States shall establish **harmonized** (Rapp 68, RE 509) requirements for a dedicated metering measurement (Rapp 68) device data validation process to check and ensure the quality and consistency (RE 509) of the respective data, and also the interoperability of new dedicated measurement devices installed after [entry into force], in compliance with Article 23 of Directive (EU) 2019/944 and the procedures set out in the network code adopted pursuant to Article 59(1), point (e), of this Regulation and taking into account the relevant Union legislation on measurement instruments (Rapp 68, EPP 511, RE 509).

2a. Where flexibility interventions are planned through the usage of such dedicated measurement devices, system operators shall be informed to ensure system stability. (EPP 516, RE 509)
Article 8
Trade on day-ahead and intraday markets

1. NEMOs shall allow market participants to trade energy as close to real time as possible and at least up to the intraday cross-zonal gate closure time. By 1 January 2028 (Rapp 69, Greens 520, Left 519), the intraday cross-zonal gate closure time shall not be at the earliest earlier than 30 minutes ahead of real time, provided that this measure does not lead to an increase in greenhouse gas emissions. National regulatory authorities may, at the request of the relevant TSO, grant a derogation from this requirement, until 1 January 2029 at the latest. The request shall include (RE 521):

   a) an impact assessment, prepared in cooperation with NEMOs, and taking into account feedback from market participants (RE 521), in accordance with Article 9 of Regulation (EU) 2015/1222, demonstrating the negative impacts of such a measure on the security of the national electricity system, cost-efficiency, integration of renewable energy and greenhouse gas emissions, and

   b) an action plan aiming at shortening the intraday cross-zonal gate closure time to 30 minutes by no later than 1 January 2029 (RE 521).

National regulatory authorities may, at the request of the relevant TSO, grant a further derogation from the requirement in the first subparagraph by a maximum of 2 years counting from the expiry of the period referred to in the second subparagraph. The request from the relevant TSO shall be submitted to the national regulatory authority of the requesting TSO, the ENTSO for Electricity and the Agency no later than 1 January 2029 and shall include:

   (a) a new impact assessment justifying the need for a further derogation, based on risks to the security of the national electricity system, cost-efficiency, integration of renewable energy and greenhouse gas emissions, taking into account feedback from market participants and NEMOs, and

   (b) a revised action plan to shorten the intraday cross-zonal gate closure time to 30 minutes by no later than 2 years after the expiry of the first derogation period.

The Agency shall issue an opinion regarding the cross-border impact of the derogations referred to in the first and fourth subparagraphs within 6 months of receipt of a request for such derogations. The concerned national regulatory authority shall take this opinion into account before deciding upon a request for a derogation.

By 1 December 2027, the Commission, in consultation with NEMOs, ENTSO for Electricity, the Agency and relevant stakeholders, shall submit a report to the European Parliament and the Council assessing the feasibility and practical solutions towards further decreasing the cross-zonal gate closure time in order to allow market participants to trade energy as close to real time as possible. The report shall consider the impacts on the electricity system security, the cost-efficiency, the benefits to the integration of renewable energies and to the reduction of greenhouse gas emissions.
2. NEMOs shall provide market participants with the opportunity to trade in energy in time intervals which are at least as short as the imbalance settlement period for both day-ahead and intraday markets.

3. NEMOs shall provide products for trading in day-ahead and intraday markets which are sufficiently small in size, with minimum bid sizes of 500 100 kW or less, to allow for the effective participation of demand-side (Rapp 70, RE 535) response, energy storage and small-scale renewables including direct participation by customers, including through aggregation (Rapp 70).

4. By 1 January 2021, the imbalance settlement period shall be 15 minutes in all scheduling areas, unless regulatory authorities have granted a derogation or an exemption. Derogations may be granted only until 31 December 2024.

From 1 January 2025, the imbalance settlement period shall not exceed 30 minutes where an exemption has been granted by all the regulatory authorities within a synchronous area.
Article 9
Forward markets

1. Within 6 months after the entry into force of this Regulation, transmission system operators shall issue long-term transmission rights or have equivalent measures in place to allow for market participants, including owners of power-generating facilities using renewable energy sources, to hedge price risks across bidding zone borders. Long-term transmission rights shall be allocated, in accordance with Regulation (EU) 2016/1719, on a regular basis, in a transparent, market based and non-discriminatory manner, with a range of maturities of up to at least three years ahead. The frequency of allocation of the long-term cross-zonal capacity shall support the efficient functioning of the forward market. All TSOs shall develop an approach aimed to increase the volume of cross-zonal capacities in forward markets and liquidity.

1. Within 12 months after the entry into force of this Regulation, the Commission in consultation with ENTSO for Electricity and relevant market stakeholders, shall conduct an assessment of the possible implementation of practical solutions addressing market parties’ hedging needs which shall consider but not be limited to the following:

a) frequency auctions for long-term transmission rights;
b) adequate product maturities for transmission rights extended up to at least three years;
c) development of a secondary market;
d) adoption of products such as financial transmission rights obligations;
e) improve investor’s certainty and price stability for consumers;
f) process on full cost-recovery to handle any financial risks and losses arising from these additional measures ensured by the regulatory authority;
g) timeline for implementation.

12. By 1 December 2024 the ENTSO for Electricity, within 18 months after the entry into force of this Regulation (EPP 546), the Commission shall submit to ACER, after having consulted the Agency, ENTSO for Electricity and ESMA, including other relevant stakeholders, shall submit to the European Parliament and the Council an assessment on the impact of a proposal for the establishment of regional virtual hubs for the forward market and where appropriate revise the Commission Regulation (EU) 2016/1719 in accordance with paragraph 1 of Article 59, (EPP 546; partially RE 558, 565). The impact assessment shall focus, inter alia, on:

(a) determining the impact of regional virtual hubs on at least the forward market, transmission system operators, market participants and end-consumers as well as the potential benefits and drawbacks that regional virtual hubs would bring compared to the existing zonal model; (Rapp 72; EPP 551; RE 549)
(b) **define the adequate (Rapp 73)** geographical scope of the **regional** virtual hubs for the forward market, including the bidding zones constituting these hubs and specific situations of bidding zones belonging to two or more virtual hubs. (RE 549; EPP 550) aiming to maximise the price correlation between the reference prices and the prices of the bidding zones constituting **regional** virtual hubs;

(c) **giving due consideration to the level of interconnectivity of Member States, in particular of those Member States below the interconnection targets set for 2020 and 2030 in Regulation (UE) 2018/1999; (Rapp 74)**

(d) **evaluating include** a methodology for the calculation of the reference prices for the **regional** virtual hubs for the forward market, aiming to maximise the correlations between the reference price and the prices of the bidding zones constituting a **regional** virtual hub; such methodology shall be applicable to all **virtual hubs** and based on predefined objective criteria;

(e) **include including (Rapp 76)** a definition of financial long-term transmission rights from bidding zones to the **regional** virtual hubs for the forward market as financial obligations to enable market participants to hedge their exposure to positive and negative price spreads, including as regards to volumes and maturities (RE 555), and the need to offer trading of long-term transmission rights between each bidding zone and the regional virtual hub (EPP 556);

(f) **how to (Rapp 77)** maximise the trading opportunities for hedging products referencing the **regional** virtual hubs for the forward market as well as for long term transmission rights from bidding zones to **regional** virtual hubs;

(g) **specifying how the single allocation platform referred to in paragraph 3 shall offer allocation and facilitate trading of long-term transmission rights; (RE 558)**

(h) **including an indicative implementation process (Rapp 78).**

2. **Within six months of receipt of the proposal on the establishment of the regional virtual hubs for the forward market, ACER shall evaluate it and either approve or amend it. In the latter case, ACER shall consult the ENTSO for Electricity before adopting the amendments. The adopted proposal shall be published on ACER’s website.**

3. The single allocation platform established in accordance with Regulation (EU) 2016/1719 shall act as an entity offering allocation and facilitating trading of long-term transmission rights on behalf of the transmission system operators. It (Rapp 80, RE 577) shall have a legal form as referred to in Annex II to Directive (EU) 2017/1132 of the European Parliament and of the Council.

4. The single allocation platform shall:

(a) **where relevant, (Rapp 82)** offer trading of long-term transmission rights between each bidding zone and, **where relevant, regional (Rapp 82)** virtual hub; where a bidding zone is not part of a virtual hub it may issue financial long-term transmission rights to a virtual hub or to other bidding zones that are part of the same capacity calculation region;
(b) allocate long-term cross-zonal capacity on a regular basis and in a transparent, market-based and non-discriminatory manner; the frequency of allocation of the long-term cross-zonal capacity shall support the efficient functioning of the forward market;

(c) offer trading of financial transmission rights that shall allow holders of these financial transmission rights to remove exposure to positive and negative price spreads, and with frequent maturities of up to at least three years ahead.

5. Where a regulatory authority based on the assessment referred to in paragraph 1 of this Article (EPP 582), and national regulatory authorities (EPP 582) may on the basis of the assessment referred to in paragraph 1 of this Article (EPP 582) considers that there are insufficient hedging opportunities available for market participants, and after consultation of relevant financial market competent authorities in case the forward markets concern financial instruments as defined under Article 4(1)(15), may require power exchanges or transmission system operators to implement additional measures, such as market-making activities, to improve the liquidity of the forward market. Subject to compliance with Union competition law and with Directive (EU) 2014/65 and Regulations (EU) 648/2012 and 600/2014, market operators shall be free to develop forward hedging products, including long-term forward hedging products, to provide market participants, including owners of power-generating facilities using renewable energy sources, with appropriate possibilities for hedging financial risks against price fluctuations. Member States shall not require that such hedging activity may be limited to trades within a Member State or bidding zone.
Article 18

Charges for access to networks, use of networks and reinforcement

1. Charges applied by network operators for access to networks, including charges for connection to the networks, charges for use of networks, and, where applicable, charges for related network reinforcements, shall be cost-reflective, transparent, take into account the need for network security and flexibility and reflect actual costs incurred insofar as they correspond to those of an efficient and structurally comparable network operator and are applied in a non-discriminatory manner. Those charges shall not include unrelated costs supporting unrelated policy objectives.

Without prejudice to Article 15(1) and (6) of Directive 2012/27/EU and the criteria in Annex XI to that Directive the method used to determine the network charges shall neutrally support overall system efficiency over the long run through price signals to customers and producers and in particular be applied in a way which does not discriminate positively or negatively between production connected at the distribution level and production connected at the transmission level. The network charges shall not discriminate either positively or negatively against energy storage or aggregation and shall not create disincentives for self-generation, self-consumption or for participation in demand response. Without prejudice to paragraph 3 of this Article, those charges shall not be distance-related.

2. Tariff methodologies shall reflect the fixed costs of transmission system operators and distribution system operators, shall consider both capital and operational expenditure, or an efficient combination of both, (RE 590) to provide appropriate incentives to transmission system operators and distribution system operators over both the short and long run, including anticipatory investments, in order to invest in network infrastructure reinforcement to facilitate the energy transition (EPP 593, RE 590) and in the additional physical and digital network elements needed to reach the objectives set out in the national energy and climate plans, while at the same time (EPP 593) increase efficiencies, to foster market integration, renewable energy production capacity and security of supply, to support the use of flexibility services, enable the use of flexible connection arrangements, efficient and timely investments, including solutions to optimise the existing grid and ensure the development of a smart grid (RE 590) and facilitate energy storage, demand response and related research activities, to reduce environmental impact, to promote acceptance, and to facilitate innovation in the interest of consumers in areas such as digitalisation, flexibility services and interconnection, more specifically to develop (RE 590, RE 592) the required infrastructure to reach the minimum 15 % electricity interconnection targets set out in Article 4, point (d)(1), of Regulation (EU) 2018/1999 (Rapp 85, RE 590, Greens 591).

The regulatory authorities in collaboration with transmission and distribution system operators, including other relevant stakeholders, shall develop a framework to assess whether transmission and distribution system operators adequately consider in their network development plans all types of anticipatory investments, such as investments for the development of grids linked to renewables acceleration areas, electric vehicle charging
infrastructure or heat pump deployment, and adequate cost-benefit analysis methodology for assessing the impact of such investments (RE 590).

3. Where appropriate, the level of the tariffs applied to producers or final customers, or both shall provide locational investment signals, e.g. incentives via tariff structure, to reduce redispatching and power grid reinforcement costs, at Union level, and take into account the amount of network losses and congestion caused, and investment costs for infrastructure.

4. When setting the charges for network access, the following shall be taken into account:

(a) payments and receipts resulting from the inter-transmission system operator compensation mechanism;

(b) actual payments made and received as well as payments expected for future periods, estimated on the basis of previous periods.

5. Setting the charges for network access under this Article shall be without prejudice to charges resulting from congestion management referred to in Article 16.

6. There shall be no specific network charge on individual transactions for cross-zonal trading of electricity.

7. Distribution tariffs shall be cost-reflective taking into account the use of the distribution network by system users including active customers. Distribution tariffs may contain network connection capacity elements and may be differen- tiated based on system users' consumption or generation profiles. Where Member States have implemented the deployment of smart metering systems, regulatory authorities shall consider time-differentiated network tariffs when fixing or approving transmission tariffs and distribution tariffs or their methodologies in accordance with Article 59 of (EU) 2019/944 and, where appropriate, time-differentiated network tariffs may be introduced to reflect the use of the network, in a transparent, cost efficient and foreseeable way for the final customer.

8. Transmission and distribution tariff methodologies shall provide incentives to transmission and distribution system operators for the most cost-efficient operation and development of their networks including through the procurement of services. For that purpose, regulatory authorities shall recognise relevant costs as eligible, including those related to anticipatory investments (Rapp 86, RE 600, Greens 597), shall include those costs in transmission and distribution tariffs, and may where applicable, shall introduce performance targets in order to provide incentives to transmission and distribution system operators to increase efficiencies overall system efficiency, quality and security of supply (EPP 598) in their networks, including through energy efficiency by applying the energy efficiency principle of the Directive ...[Revised EED Directive], the use of flexibility and demand response (EPP 598) services and the development of smart grids and intelligent metering systems in accordance with the features of the given electricity system and climate policy objectives (EPP 598).

8a. Transmission and distribution system operators shall offer the possibility of establishing flexible connection agreements in those areas where there is limited or no
network capacity availability for new connections, which shall be published in accordance with Article 50(4a)(1) and Article 31(3) of Directive (EU) 2019/944. Such flexible connection agreements shall specify the following:

(a) the maximum firm import and export of electricity from and to the grid, as well as the additional flexible import and export capacity that can be connected and differentiated by time blocks throughout the year;

(b) the network charges applicable to both the firm and flexible import and export capacities;

(c) the probabilities of curtailment if the maximum firm capacity is exceeded;

(d) the agreed duration of the flexible connection agreement and the agreed date for granting connection to the entire requested firm capacity. (RE 1009)

The system user requesting a flexible grid connection shall be requested to install a power control system that is certified by a national standards body. (Rapp 87, partially RE 1242)

National regulatory authorities shall ensure that flexible connection agreements are not used as a permanent alternative and thus do not delay approved network reinforcement in the identified areas.

9. By 5 October 2019 in order to mitigate the risk of market fragmentation ACER shall provide a best practice report on transmission and distribution tariff methodologies while taking account of national specificities. That best practice report shall address at least:

(a) the ratio of tariffs applied to producers and tariffs applied to final customers;

(b) the costs to be recovered by tariffs;

(c) time-differentiated network tariffs;

(d) locational signals;

(e) the relationship between transmission tariffs and distribution tariffs;

(f) methods to ensure transparency in the setting and structure of tariffs, including anticipatory investments determined in close consultation with relevant stakeholders, including transport and heating and cooling sector, in line with the relevant European and national energy objectives, and take into account the acceleration areas in accordance with Directive (EU) 2018/2001 (Rapp 88);

(g) groups of network users subject to tariffs including, where applicable, the characteristics of those groups, forms of consumption, and any tariff exemptions;

(h) losses in high, medium and low-voltage grids;

(i) incentives for efficient investments in networks, including on flexibility resources and flexible connection agreements. (EPP 602, RE 603)
ACER shall update the best practice report at least once every two years.

10. Regulatory authorities shall duly take the best practice report into consideration when fixing or approving transmission tariffs and distribution tariffs or their methodologies in accordance with Article 59 of Directive (EU) 2019/944.
Article 19

Congestion income

1. Congestion-management procedures associated with a pre-specified timeframe may generate revenue only in the event of congestion which arises for that timeframe, except in the case of new interconnectors which benefit from an exemption under Article 63 of this Regulation, Article 17 of Regulation (EC) No 714/2009 or Article 7 of Regulation (EC) No 1228/2003. The procedure for the distribution of those revenues shall be subject to review by the regulatory authorities and shall neither distort the allocation process in favour of any party requesting capacity or energy nor provide a disincentive to reduce congestion.

2. The following objectives shall have priority with the respect to the allocation of any revenues resulting from the allocation of cross-zonal capacity:

(a) guaranteeing the actual availability of the allocated capacity including firmness compensation; or

(b) maximising and (Rapp 89) increasing cross-zonal capacities through optimisation of the usage of existing interconnectors by means of coordinated remedial actions, where applicable, or covering costs resulting from network investments that are relevant to reduce interconnector congestion; or

(c) as part of the permitting process and following a coordinated decision taken by the Member States involved, on the implementation of compensating offshore bidding zones and on the design of the support mechanism, contributing to the partial compensation to offshore renewable generators generation plant operators in an offshore bidding zone in the event of not if access to interconnected markets has been reduced in such a way that one or more transmission system operators have not made enough capacity available on the interconnector as agreed in the connection agreement or in the critical network elements affecting the capacity of the interconnector pursuant to capacity calculation rules defined in Article 16 (3, 8 and 9) of Regulation 2019/943 (SD 612), resulting in leading to the simultaneous loss of revenue of the offshore renewable generator and an excess revenue on the interconnector, provided that any consumption in the bidding zone is not a co-driver of the price formation (Greens 614) the offshore plant operator not being able to export its electricity generation capability to the market. Only the excess interconnector revenue shall be used for the compensation of offshore renewable generators. On an annual basis, the total compensation of all generators in the concerned bidding zone shall not exceed the total congestion income generated on interconnectors between the concerned offshore bidding zone and neighbouring bidding zones (EPP 611, SD 612) during the specific market settlement periods where such compensation applies.

By 31 December 2024, the Commission shall amend Regulation (EU) 2015/1222 in accordance with Article 59 as regards the implementation details of this partial compensation, outlining a methodology for calculation of the partial compensation and including the conditions under which the measure may expire. (EPP 611; RE 613; Greens 614)
Article 19a

Power purchase agreements

1. Member States shall remove barriers and (Rapp 91, EPP 621, SD 624, SD 626, RE 627, RE 628, Greens 625, ECR 622) facilitate power purchase agreements (‘PPAs’), in particular renewables power purchase agreements (Rapp 91), with a view to reaching the objectives set out in their integrated national energy and climate plan with respect to the dimension decarbonisation referred to in point (a) of Article 4 of Regulation (EU) 2018/1999, and to ensure more predictable electricity prices (Rapp 91, Greens 625) while preserving competitive and liquid electricity markets. In order to ensure the removal of barriers to PPAs, the Commission may draw up specific guidance on how to alleviate administrative obligations and accounting complexities related to PPAs. (EPP 621).

1a. By 31 December 2024, the Commission, in cooperation with NEMOs, shall establish a market platform for power purchase agreements, to be used on a voluntary basis (EPP, 674, RE 676, ECR 622), including the optional standardised PPAs referred to in Article 19ac, while avoiding that this trade lowers liquidity in existing electricity markets. (EPP 674, RE 676) The platform shall facilitate the pooling of demand for PPAs through aggregation. (Rapp 92, EPP 631, Greens 634, ECR 622)

2. Member States in a coordinated way and where appropriate with the support of the European Investment Bank (‘EIB’) (EPP 638) or other Union-level facilities shall ensure that instruments such as guarantee schemes at market prices, to reduce the financial risks associated to off-taker payment default in the framework of PPAs are in place and accessible to customers that face entry barriers to the PPA market and are not in financial difficulty in line with Articles 107 and 108 TFEU. Such instruments shall facilitate the pooling of demand for PPAs (Rapp 93, Greens 641) and may include, inter alia, guarantee schemes at market prices (Rapp 93, EPP 638) or private guarantees in compliance with relevant Union law (Rapp 93). For this purpose, Member States shall take into account Union-level instruments. Member States shall determine what categories of customers are targeted by these instruments, applying non-discriminatory criteria among each category of customers, (SD 93, Greens 641) in particular, micro enterprises, SMEs, households, including via aggregators, renewable energy communities, citizen energy communities and suppliers with no generation assets (EPP 638, Greens 641).

3. Guarantee schemes for PPAs backed by the Member States, the European Investment Bank (EPP 649) or other Union-level facilities shall include provisions to avoid lowering the liquidity in electricity markets and shall not provide support to the purchase of generation from fossil fuels and shall not prevent the subjected generators to participate in balancing and ancillary services markets (Rapp 94, EPP 649, Greens 651, NA 648). Whenever conditions allow, these guarantee schemes shall exclusively support the purchase of new renewable generation.

4. In the design of the support schemes for electricity from renewable sources, Member States (EPP 657) shall allow the participation of projects which reserve part of the electricity for sale through a renewable (Rapp 95) PPA or other market-based arrangements, provided that the two parties to the PPA are not controlled by the same entity (Rapp 95) unless the
buyer acts as an aggregator of customers that face entry barriers to the PPA market, and provided that double commitment of the same capacity is avoided.

4a. In the design of such support schemes Member States (Rapp 95, EPP 666) shall and endeavour to make use of evaluation criteria to incentivise bidders to facilitate (EPP 666) the access to the PPA market for of customers that face entry barriers to the PPA market, provided this does not negatively affect competition in the market. In particular, such evaluation criteria may give preference to bidders presenting a signed PPA or a commitment to sign a PPA for part of the project's generation from one or several potential buyers that face entry barriers to the PPA market. (Rapp 95, EPP 657, EPP 658, EPP 666)

5. PPAs shall specify the bidding zone of delivery and the responsibility for securing cross-zonal transmission rights in case of a change of bidding zone in accordance with Article 14.

6. PPAs shall specify the conditions under which customers and producers may exit from PPAs, such as any applicable exit fees and notice periods, in accordance with Union competition law.

6a. Member States shall ensure that regulatory measures are not revised in a way that alters the terms of, or is detrimental to, PPAs that have been signed before the entry into force of the regulatory measure. (EPP 680, RE 681, ID 684, ECR 683)

6b. The Commission shall assess by January 2026 and every two years thereafter whether barriers persist and whether there is sufficient transparency in the PPAs markets. (EPP 631, SD 635, RE 636, Greens 685)
Article 19ab

Union PPA database (Rapp 96)

1. The Agency shall set up, maintain, and manage a Union PPA database (the ‘Database’). The Database shall function as a digital platform and shall be used to facilitate the Agency’s and national regulatory authorities’ monitoring of relevant information on the PPAs signed in the Union. National regulatory authorities may establish similar databases at national level.

2. For the purpose of setting up the Database, market participants entering into PPAs, or persons acting on their behalf, shall provide the Agency with details of the PPAs. Market participants who have reported records of PPAs in accordance with Regulation (EU) No 1227/2011 and Regulation (EU) No 648/2012 shall not be subject to double reporting obligations relating to those contracts.

3. On the basis of the information collected, the Agency shall publish an annual report on the PPA market at Union and Member State level as part of the monitoring report referred to in Article 15 of Regulation (EU) 2019/942.

4. The Agency shall develop the technical and functional specifications of the Database, including the interoperable data exchange mechanism for exchanging the information with national regulatory authorities and the format for electronic submissions. The Agency shall ensure that the Database is fully operational by ... [12 months after the date of entry into force of this amending Regulation].

5. The Commission shall, by means of implementing acts according to Article 8 of Regulation (EU) No 1227/2011, specify the details, timing and form of reporting.
Article 19ac

Voluntary standardised PPAs

The Agency, together with the NEMOs and in consultation with relevant stakeholders shall develop standardised PPAs designed to simplify the procedure and to match the risk profile of customers of different size (EPP 670). The use of those standardised PPAs shall be voluntary for the contracting parties. Standardised PPAs shall have, inter alia, the following characteristics:

(a) offer a variety of shorter contract durations (Rapp 97, EPP 670), including of up to five years; (Rapp 97)
(b) offer electricity supply at different timeframes; (Rapp 97, EPP 670)
(c) provide different price formulas; (Rapp 97, EPP 670)
(d) consider the load profile required by the customer. (Rapp 97, EPP 670)

The standardised contracts may also specify the conditions under which customers and producers may exit from PPAs, such as any applicable exit fees and notice periods, in accordance with Union competition law. (EPP 670)
Article 19ad

European Renewable Energy Auction Scheme

1. Where, on the basis of its assessment of the draft integrated national energy and climate plans pursuant to Article 9 of the Regulation (EU) 2008/1999, the Commission concludes that the contributions of the Member States are insufficient for the achievement of the additional 2.5% to attain the target of 45% share of energy from renewable sources in the Union's gross final consumption of energy in 2030 according to Directive (EU) 2018/2001, the Commission shall take additional measures to achieve the target which may include instruments at Union level, such as European wide auctions, in particular additional Union backed guarantees for PPAs as well as contracts for differences to support the deployment of additional renewable energy capacities corresponding to at least the additional 2.5% to attain the Union target of 45%.

2. Support may include investments into co-located infrastructure or storage to enable the power system integration of the renewable electricity generated.
Article 19b

1. Direct price support schemes for new investments for the generation of electricity from the sources listed in paragraph 2 shall (Rapp 98, RE 693, 694, 696, ECR 702, Left 697) take the form of a two-way contracts for differences, or equivalent schemes achieving the same goals (EPP 695, 699; RE 693; ECR 702) after assessment and approval by the Commission on the equivalence of such schemes. The participation in such schemes shall be voluntary for the market participants. Such schemes shall be allocated through a competitive, open, transparent, non-discriminatory, and cost-effective procedure, in accordance with State Aid guidelines, preventing undue distortions to the efficient functioning of electricity markets and preserving incentives to operate and participate efficiently in the electricity markets (EPP 695, 699, 808; RE 693, 694; ID 805). New investments for the generation of electricity shall include investments in new power-generating facilities, or investments aimed at repowering existing power-generating facilities, or investments aimed at extending existing power-generating facilities if the increase of power generation capacity is substantial or at prolonging their lifetime.

For the investments aimed at extending existing power-generating facilities, two-way contracts for differences shall be strictly limited to the share of the total power-generation capacity that reflects the costs of the new investment in relation to the total investment costs of the power-generating facility (Rapp 99, SD 692, Greens 711).

The first subparagraph shall apply to contracts under direct price support schemes for new investments in generation concluded as of ... [one year after the date of entry into force of this amending Regulation] (Rapp 100, EPP 730).

Member States shall ensure that the volume and level of contracts for differences not issued as part of a competitive bidding process under the Directive (EU) 2018/2001, do not surpass the level and volume of those issued as part of competitive bidding processes in their respective Member State. (Greens 717)

2. Paragraph 1 shall apply to new investments in generation of electricity from the following sources:

(a) wind energy;
(b) solar energy;
(c) geothermal energy;
(d) hydropower without reservoir;
(e) nuclear energy;

3. Direct price support schemes in the form of two-way contracts for difference as referred to in paragraph 1 shall at least (EPP 736):
(a) be designed so that the revenues collected when the market price is above the strike price are distributed to all final electricity customers, with particular attention to vulnerable customers and those affected by or at risk of energy poverty as defined in Article 2, point (48), of Directive [EED] (Rapp 101, EPP 738). Member States may also dedicate the revenues to compensate the cost of the support scheme where the market price is below the strike price (Rapp 101, EPP 738, 770, SD 758, Greens 737), or to support investments for the energy transition (RE 753) in distribution grid development, renewable energy sources, EV charging infrastructure, energy efficiency and storage, or to cover energy-intensive industries at risk of carbon leakage if they demonstrate significant emission reductions through their decarbonisation efforts for reaching climate neutrality, including a transformation plan that sets out key elements on their pathway (SD 800). Revenues distributed to final customers which are energy-intensive undertakings shall cover all undertakings in proportion to their share of consumption (same refund per MWh consumed). The revenues shall be distributed according to a fair, transparent and non-discriminatory methodology. (Rapp 101, Partly EPP 738, 742, 744, SD 743, RE 740, Greens 737, Left 741) based on their share of consumption (same cost/refund per MWh consumed);

(b) ensure that the distribution of the revenues to final electricity customers is designed so as not to remove the incentives of consumers to reduce their consumption or shift it to periods when electricity prices are low and not to undermine competition between electricity suppliers;

c) take into consideration locational criteria to ensure that new investments in generation take place in optimal locations, taking into account congestion conditions and grid development plans (Rapp 103, EPP 798, partly Left 767);

(d) be designed so that the level of, and the conditions attached to, the support granted to the energy projects are not revised in a way that negatively affects the rights conferred thereunder and undermines the economic viability of projects that already benefit from support. Member States may adjust the level of support in accordance with objective criteria, provided that such criteria are established in the original design of the support scheme; (Rapp 98; RE 696; EPP 774)

(e) include penalty clauses applicable in the case of unilateral early termination of the contract (Rapp 106, EPP 792, 799);

(f) not receive support for production in any period in which the market value of that production is negative (Rapp 107);

(g) minimise their possible negative impact on the liquidity of forward market and on competition between electricity suppliers (EPP 771, partly 786, 787, 795, RE 773);

(h) be designed to preserve the incentives for the generating facility to operate and participate efficiently in the electricity markets, in particular to adjust its production to reflect market circumstances (Rapp 46, partly EPP 778, RE 777, 781);

(i) be designed to comply with the principles set out in Article 4(2) and Article 4(3), first and third subparagraphs, of Directive (EU) 2018/2001, and with State Aid rules and competition law; (EPP 782, Greens 793).
3a. The Commission, by 12 months of entry into force of this Regulation, shall draw up guidelines on the implementation of two-way contracts for differences to assist Member States on their set up (EPP 712, 802, SD 801, RE 709, Greens 803, ID 710).

3b. The Agency shall monitor the implementation of direct price support schemes in all Member States and issue a report on implementation and impact of price support schemes on competition and functioning of the internal electricity market (RE 804).
Article 19c
Assessment of flexibility needs

1. Within 12 months from the publication of the adopted proposal by the Agency referred to in paragraph 6 (EPP 810, By 1 January 2025) and every two years thereafter, the regulatory authority of each Member State shall assess and draw up a report on the estimated needs for flexibility at national level (RE 816), including flexibility needs in a future net-zero in the electricity system, for a period of at least 5-10 years (Rapp 108, EPP 828, RE 816, Greens 809), in view of the need to cost effectively achieve security of supply and decarbonise the power system, contribute to the stability and reliability of the system and the efficient management and development of electricity networks, (Rapp 108, partly Greens 809) taking into account the integration of the renewable energy sources and different sectors including the sector coupling potential (EPP 813). The report shall be based on the data and analyses provided by the transmission and distribution system operators of that Member State, after conducting a public consultation, including with all relevant stakeholders (Greens 809) pursuant to paragraphs 2 and 3 of this Article (Rapp 108, EPP 810, 821) and using the methodology pursuant to paragraph 4 of this Article. The report shall include an assessment of the available cross-border flexibility, including the progress made towards the 15 % electricity interconnection target set out in Regulation (EU) 2018/1999 (Rapp 108). The report shall take into account the European Resource Adequacy assessment and national adequacy assessments pursuant to Article 20 of Regulation (EU) 2019/943 (EPP 810, Greens 809, ECR 817).

1a By 1 January 2026 and every two years thereafter, the Agency shall draw up a report to assess the need for flexibility in the electricity system at Union level and its economically available potential (Greens 809) for a period of at least 10 years (Rapp 109, RE 816). In addition, the Agency shall assess the introduction of shorter-term products for flexibility, flexible network assets and connections, and better prequalification requirements for participation in the balancing markets (Greens 809). Within a year, Member States shall receive recommendations from the Agency to, where applicable, adapt the national report (Greens 809).

2. The report referred to in paragraphs 1 and 1a (Rapp 110) shall include an evaluation assessment (Rapp 110) of the different types of needs (EPP 823) need for flexibility to integrate electricity generated from renewable sources in the electricity system and consider, in particular, the potential of non-fossil flexibility such as demand side response and energy storage, to fulfil this need, both at transmission and distribution levels. The reports shall distinguish between flexibility needs within all relevant timeframes (EPP 823, RE 831) and, at least, interannual, seasonal, daily and hourly flexibility needs, and between zonal flexibility needs, ensure that all ancillary services are considered, consider congestion within a bidding zone and renewable energy curtailment levels. The reports shall include, inter alia, a high fossil fuel electricity price crisis scenario and a business-as-usual scenario and suggest minimum levels that will ensure system efficiency and resilience in line with the Union’s energy and climate objectives (Rapp 110, Greens 822).
2a. The reports referred to in paragraphs 1 and 1a shall also include an evaluation of measures aiming to improve markets for the procurement of system stability services from non-fossil flexibility sources (Rapp 111), including recommendations on how to remove barriers to the entry of non-fossil flexibility assets (Greens 822).

3. The electricity transmission and distribution system operators of each Member State, and if requested the gas and hydrogen transmission and distribution system operators, (Based on EPP 837) shall provide the data and analyses needed for the preparation of the reports (Rapp 112) referred to in paragraphs 1 and 1a (Rapp 112) to the regulatory authority.

4. The ENTSO for Electricity and the EU DSO entity shall coordinate transmission and distribution system operators as regards the data and analyses to be provided in accordance with paragraph 2. In particular, they shall:

   (a) define the type of data and requirements and the format of the data (Rapp 113, RE 850) in accordance with paragraph 6 of this Article that transmission and distribution system operators shall provide to the regulatory authorities; such system data requirements shall include a timetable for the digitalisation of the power network (EPP 887);

   (b) develop a methodology for the analysis by transmission and distribution system operators of the flexibility needs to achieve optimisation of the grid and security of supply (RE 854) and, taking into account at least all existing sources of flexibility in a cost-efficient manner (RE 854) and planned investments at interconnection, transmission and distribution level, the needs and level of flexibility of the rest of the directly interconnected Member States (Rapp 114) as well as the level of renewable energy sources in the electricity mix needed to achieve the target set out in Article 3(1) of Directive (EU) 2018/2001 and the need to decarbonise the electricity system in compliance with the Paris Agreement and the objective of climate neutrality by 2050 at the latest (Rapp 114, Greens 860);

   (c) provide guiding criteria on how to assess the capability of the most suitable flexibility sources to cover the needs (Rapp 115);

   (d) define the segmentation of flexibility into different timeframes and the requirements for the assessment of flexibility at Union and national level, taking into account at least all existing and expected investments in flexible resources in the interconnected system as well as planned investments in interconnections for the following 10 years (Rapp 116, RE 855, partly Greens 859);

   (e) propose the deadlines for the provision of data and analyses needed for the EU and national reports. (RE 861)

5. The ENTSO for Electricity and the EU DSO entity shall closely cooperate with each other regarding the coordination of transmission and distribution system operators as regards the provision of data and analyses of paragraph 4 (RE 834);

6. By 1 March 2024, the ENTSO for Electricity and the EU DSO entity shall jointly submit to ACER a proposal regarding the type of data and format to be submitted to regulatory authorities and the methodology for the assessment of flexibility (RE 875) referred to in paragraph 4. Within three months of receipt of the proposal, ACER shall either approve the proposal or amend it. In the latter case, ACER shall consult the
Electricity Coordination Group, the (Rapp 117, RE 875) ENTSO for Electricity and the EU DSO entity before adopting the amendments. The adopted proposal shall be published on ACER's website and shall constitute the single common format used by all transmission and distribution system operators to comply with the obligations under paragraph 3 (Rapp 117).

7. The regulatory authorities shall submit the reports referred to in paragraph 1 to ACER and publish them. Within 12–6 months of receipt of the reports, ACER and the European Scientific Advisory Board on Climate Change (ESABCC) (Rapp 118, Greens 880) shall issue a report analysing them, taking into account the conclusions of the report referred to in paragraph 1a (Rapp 118), and providing recommendations on the removal of barriers to entry of non-fossil flexible resources (RE 877) and on issues of cross-border relevance regarding the findings of the regulatory authorities. Within 12 months ESABCC may submit an opinion on the methodology and issue a report analysing compliance with Union climate targets and the goals of the Paris Agreement (Rapp 118, partly Greens 880).

7a. Member States shall submit the report referred to in paragraph 1 to the Commission and shall make it available to the public. On the basis of the reports, the Commission may issue recommendations for a best practise methodology. (Rapp 119).

7b. The national assessment of flexibility needs shall be used as inputs in the scope of the methodology set for the European resource adequacy assessments in accordance with Article 23 (3) of Regulation (EU) 2019/943, of the methodology set for the Ten Years Network Development Plan and of the methodology set for the DSOs’ Network Development Plans (EPP 884, RE 885).

7c. The ENTSO for Electricity shall update the Union-wide network development plan to include the results of the flexibility needs assessments, as well as the recommendations from the ESABCC, if issued. (Greens 886)
Article 19d

Indicative national **objective objectives** for demand side response and energy storage *(Rapp 120)*

I. **Based on On the basis of (Rapp 121)** the report of the regulatory authority **pursuant referred to in Article 19c(1)**, each Member State shall define **an indicative separate quantifiable (Rapp 121, Greens 902)** national objectives (Rapp 121, Greens 902) for demand side response and energy storage **based on available capacity and develop a plan for delivering these objectives (Rapp 121)**, considering all non-fossil flexibility sources with (RE903) the most cost-efficient solutions, all time frames, and the availability of cross-border capacity (RE 903) and including roadmaps and concrete measures to reduce barriers for the participation of flexibility such as demand response and energy storage in the market (EPP 897). The Those indicative national objective-objects shall take into account ACER’s opinion and recommendations referred to in Article 19c(7), shall include a quantification of actual available and forecasted capacity and energy content, and (Rapp 121) shall also be reflected in Member States’ integrated national energy and climate plans as regards the dimension “Internal Energy Market” in accordance with Articles 3, 4 and 7 of Regulation (EU) 2018/1999 and in their integrated biennial progress reports in accordance with Article 17 of Regulation (EU) 2018/1999, as well as in the European resource adequacy assessments in accordance with Article 23 (3) of Regulation (EU) 2019/943, and inclusion of the objectives in the TYNDP and the DSOs network development plans (Partly EPP 897). The plan to deliver the first flexibility evaluation shall be incorporated into the 2024 integrated national energy and climate plans as an addendum upon completion (Rapp 121). Member States that have already defined objectives for demand response and storage in their integrated national energy and climate plans before the entry into force of this Regulation, may use these objectives until they are updated according to the report defined in Article 19c(1). (RE 898)

1a. **By June 2025, the Commission, after assessing the national objectives for demand response and energy storage communicated by the Member States through their integrated national energy and climate plans and in the light of ACER’s opinion and recommendations referred to in Article 19c(7), shall submit a report to the European Parliament and to the Council assessing the national plans. In the light of the conclusions of that report, the Commission shall draw up a Union strategy on demand response and energy storage consistent with the Union’s 2030 targets for energy and climate as defined in Article 2, point (11), of Regulation (EU) 2018/1999 and the climate-neutrality objective laid down in Article 2 of Regulation (EU) 2021/1119 which may be accompanied, where appropriate, by a legislative proposal amending this Regulation and introducing minimum demand response and energy storage targets at Union level (Rapp 122, Greens 896, the Left 910).**

1b. **Transmission and distribution system operators shall include in their network development plans the national objectives for demand side response and energy storage set out in paragraph 1. (Rapp 123)**
Article 19e

Flexibility support schemes

1. Member States which apply a capacity mechanism in accordance with Article 21 shall consider the promotion of the participation of non-fossil flexibility flexible resources (RE 912) such as demand side response and energy storage by introducing additional criteria or features in the design of the capacity mechanism ensuring that the product design, including all participation requirements, are market-based (Greens 913) and do not impose any undue barriers on demand response and energy storage (Rapp 124, SD 914, partially Greens 913, the Left 920).

2. Where the measures introduced in accordance with paragraph 1 to promote the participation of non-fossil flexibility flexible resources (RE 938) such as demand response and energy (Rapp 124, EPP 940) storage in capacity mechanisms are insufficient to achieve the flexibility needs identified in accordance with Article 19d, Member States may apply flexibility support schemes consisting of payments for the available capacity of non-fossil flexibility flexible resources (RE 938) such as demand side response and energy (EPP 940) storage including charging services for electric vehicles or hydro with reservoir and/or pumping (Rapp 124).

3. Member States which do not apply a capacity mechanism may apply flexibility support schemes consisting of payments for the available capacity of non-fossil flexibility flexible resources (RE 950) such as demand side (Rapp 124) response and energy (EPP 952) storage including charging services for electric vehicles or hydro with reservoir and/or pumping (Rapp 124).
Article 19f
Design principles for flexibility support schemes

Flexibility support scheme for non-fossil flexibility flexible resources (RE 963) such as demand response and energy (Rapp 125) storage applied by Member States in accordance with Article 19e(2) and (3) (Rapp 125) shall:

(a) not go beyond what is necessary to address the identified flexibility needs in a cost-effective manner;

(b) be limited to new investments in non-fossil flexibility flexible resources (RE 978) such as demand side-response and energy (Rapp 127, EPP 965) storage;

(ba) take into consideration locational criteria to ensure that investments in new capacity take place in optimal locations (Rapp 128, Greens 982);

(c) must not imply starting fossil fuel-based generation located behind the metering point;

(d) select capacity providers by means of an open, transparent, competitive, voluntary (EPP 984; RE 985) non-discriminatory and cost-effective process;

(e) prevent undue distortions to the efficient functioning of the electricity markets including preserving efficient operation incentives and price signals and the exposure to price variation and market risk;

(f) provide incentives for the integration in the electricity market in a market-based and market-responsive way, while avoiding unnecessary distortions of electricity markets as well as taking into account possible system integration costs and grid congestion (ECR 988) and stability;

(g) set out a minimum level of participation in the market in terms of activated energy, which takes into account the technical specificities of energy storage and demand response assets (Rapp 129);

(h) apply appropriate penalties to capacity providers which do not respect the minimum level of participation in the market referred to in point (g), or which do not follow efficient operation incentives and prices signals;

(i) where technically feasible (Rapp 130, EPP 996), be open to cross-border participation.'
Article 21

General principles for capacity mechanisms

1. To eliminate residual resource adequacy concerns, Member States may, as a last resort (Rapp 131), while implementing the measures referred to in Article 20(3) of this Regulation in accordance with Article 107, 108 and 109 of the TFEU, introduce capacity mechanisms.

2. Before introducing capacity mechanisms, the Member States concerned shall conduct a comprehensive study of the possible effects of such mechanisms on the neighbouring Member States by consulting at least its neighbouring Member States to which they have a direct network connection and the stakeholders of those Member States.

3. Member States shall assess whether a capacity mechanism in the form of strategic reserve is capable of addressing the resource adequacy concerns. Where this is not the case, Member States may implement a different type of capacity mechanism.

4. Member States shall not introduce capacity mechanisms where both the European resource adequacy assessment and the national resource adequacy assessment, or in the absence of a national resource adequacy assessment, the European resource adequacy assessment have not identified a resource adequacy concern.

5. Member States shall not introduce capacity mechanisms before the implementation plan as referred to in Article 20(3) has received an opinion by the Commission as referred to in Article 20(5).

6. Where a Member State applies a capacity mechanism, it shall review that capacity mechanism and shall ensure that no new contracts are concluded under that mechanism where both the European resource adequacy assessment and the national resource adequacy assessment, or in the absence of a national resource adequacy assessment, the European resource adequacy assessment have not identified a resource adequacy concern or the implementation plan as referred to in Article 20(3) has not received an opinion by the Commission as referred to in Article 20(5).

7. When designing capacity mechanisms Member States shall include a provision allowing for an efficient administrative phase-out of the capacity mechanism where no new contracts are concluded under paragraph 6 during three consecutive years.

8. Capacity mechanisms shall be temporary. They shall be approved by the Commission for no longer than 10 years. They shall be phased out or the amount of the committed capacities shall be reduced on the basis of the implementation plans referred to in Article 20. Member States shall continue to apply the implementation plan after the introduction of the capacity mechanism.
Article 50

Provision of information

1. Transmission system operators shall put in place coordination and information exchange mechanisms to ensure the security of the networks in the context of congestion management.

2. The safety, operational and planning standards used by transmission system operators shall be made public. The information published shall include a general scheme for the calculation of the total transfer capacity and the transmission reliability margin based upon the electrical and physical features of the network. Such schemes shall be subject to approval by the regulatory authorities.

3. Transmission system operators shall publish estimates of available transfer capacity for each day, indicating any available transfer capacity already reserved. Those publications shall be made at specified intervals before the day of transport and shall include, in any event, week-ahead and month-ahead estimates, as well as a quantitative indication of the expected reliability of the available capacity.

4. Transmission system operators shall publish relevant data on aggregated forecast and actual demand, on availability and actual use of generation and load assets, on availability and use of the networks and interconnections, on balancing power and reserve capacity and on the availability of flexibility. For the availability and actual use of small generation and load assets, aggregated estimate data may be used.

4a. Transmission system operators shall publish in a clear and transparent manner, information on the capacity available for new connections in their respective areas of operation with high resolution and grid granularity, while respecting security classified information and data confidentiality (RE 1011), including the criteria used to calculate such available capacity (SD 134, EPP 1012, Greens 1013) such as curtailment assumptions (Rapp 133, EPP 1012), the level of self-consumption capacity installed (Rapp 133), topological and electrical characteristics of the grid, the demand and generation (Rapp 133, EPP 1012) for the next five years and (Rapp 133) in congested areas if flexible energy storage connections can be accommodated, and update that information regularly, at least quarterly monthly (Rapp 133, Greens 1013). Before publication, transmission and distribution system operators shall consult all relevant system users on the criteria to be used to calculate such available capacity and shall send to its national regulatory authority a proposal for approval.

Transmission system operators shall also provide clear and transparent information to system users about the status and treatment of their connection requests, including renewable generation and storage temporarily connected with a flexible connection agreement (RE 1019). They shall provide such information within a period of three months from the submission of the request.

5. The market participants concerned shall provide the transmission system operators with the relevant data.
6. Generation undertakings which own or operate generation assets, where at least one generation asset has an installed capacity of at least 250 MW, or which have a portfolio comprising at least 400 MW of generation assets, shall keep at the disposal of the regulatory authority, the national competition authority and the Commission, for five years all hourly data per plant that is necessary to verify all operational dispatching decisions and the bidding behaviour at power exchanges, interconnection auctions, reserve markets and over-the-counter-markets. The per-plant and per hour information to be stored shall include, but shall not be limited to, data on available generation capacity and committed reserves, including allocation of those committed reserves on a per-plant level, at the times the bidding is carried out and when production takes place.

7. Transmission system operators shall exchange regularly a set of sufficiently accurate network and load flow data in order to enable load flow calculations for each transmission system operator in its relevant area. The same set of data shall be made available to the regulatory authorities, and to the Commission and Member States upon request. The regulatory authorities, Member States and the Commission shall treat that set of data confidentially, and shall ensure that confidential treatment is also given by any consultant carrying out analytical work on their request, on the basis of those data.
Article 57

Cooperation between distribution system operators and transmission system operators

1. Distribution system operators and transmission system operators shall cooperate with each other in planning and operating their networks. In particular, distribution system operators and transmission system operators shall exchange all necessary information and data regarding, the performance of generation assets and demand side response, the daily operation of their networks and the long-term planning of network investments, with the view to ensure the cost-efficient, secure and reliable development and operation of their networks.

2. Distribution system operators and transmission system operators shall cooperate with each other in order to achieve coordinated access to resources such as distributed generation, energy storage or demand response that may support particular needs of both the distribution system operators and the transmission system operators.

3. Distribution system operators and transmission system operators shall cooperate with each other in publishing information on the capacity available for new connections in their respective areas of operation in a consistent manner and giving sufficient granular visibility to developers of new energy projects and other potential network users. They shall jointly publish in a clear and transparent manner the requirements in terms of grid development and system services, and the required systems and processes to facilitate its development (EPP 1023). In addition, they shall also cooperate with each other in publishing information on the installed electricity capacity of self-consumption (Rapp 135).
Establishment of network codes

1. The Commission is empowered to adopt implementing acts in order to ensure uniform conditions for the implementation of this Regulation by establishing network codes in the following areas:

(a) network security and reliability rules including rules for technical transmission reserve capacity for operational network security as well as interoperability rules implementing Articles 34 to 47 and Article 57 of this Regulation and Article 40 of Directive (EU) 2019/944, including rules on system states, remedial actions and operational security limits, voltage control and reactive power management, short-circuit current management, power flow management, contingency analysis and handling, protection equipment and schemes, data exchange, compliance, training, operational planning and security analysis, regional operational security coordination, outage coordination, availability plans of relevant assets, adequacy analysis, ancillary services, scheduling, and operational planning data environments;

(b) capacity-allocation and congestion-management rules pursuant to Article 6 of Directive (EU) 2019/944 and Articles 7 to 10, 13 to 17, 19 and 35 to 37 of this Regulation, including rules on day-ahead, intraday and forward capacity calculation methodologies and processes, grid models, bidding zone configuration, redispatching and countertrading, trading algorithms, single day-ahead and intraday coupling including the possibility of being operated by a single entity (Rapp 136, EPP 1025, RE 1027, ID 1028, NA 1026) the firmness of allocated cross-zonal capacity, congestion income distribution, the allocation of financial long-term transmission rights by the single allocation platform, cross-zonal transmission risk hedging, nomination procedures, and capacity allocation and congestion management cost recovery;”;

(c) rules implementing Articles 5, 6 and 17 in relation to trading related to technical and operational provision of network access services and system balancing, including rules on network-related reserve power, including functions and responsibilities, platforms for the exchange of balancing energy, gate closure times, requirements for standard and specific balancing products, procurement of balancing services, allocation of cross-zonal capacity for the exchange of balancing services or sharing of reserves, settlement of balancing energy, settlement of exchanges of energy between system operators, imbalance settlement and settlement of balancing capacity, load frequency control, frequency quality defining and target parameters, frequency containment reserves, frequency restoration reserves, replacement reserves, exchange and sharing of reserves, cross-border activation processes of reserves, time-control processes and transparency of information;

(d) rules implementing Articles 36, 40 and 54 of Directive (EU) 2019/944 in relation to non-discriminatory, transparent provision of non-frequency ancillary services, including rules on steady state voltage control, inertia, fast reactive current injection, inertia for grid stability, short circuit current, black-start capability and island operation capability;
(e) rules implementing Article 57 of this Regulation and Articles 17, 31, 32, 36, 40 and 54 of Directive (EU) 2019/944 in relation to demand response, including rules on aggregation, energy storage, and demand curtailment rules.

Those implementing acts shall be adopted in accordance with the examination procedure referred to in Article 67(2).

2. The Commission is empowered to adopt delegated acts in accordance with Article 68 supplementing this Regulation with regard to the establishment of network codes in the following areas:

(a) network connection rules including rules on the connection of transmission-connected demand facilities, transmission-connected distribution facilities and distribution systems, connection of demand units used to provide demand response, requirements for grid connection of generators and other system users (RE 1029), requirements for high-voltage direct current grid connection, requirements for direct current-connected power park modules and remote-end high-voltage direct current converter stations, and operational notification procedures for grid connection;

(b) data exchange, settlement and transparency rules, including in particular rules on transfer capacities for relevant time horizons, estimates and actual values on the allocation and use of transfer capacities, forecast and actual demand of facilities and aggregation thereof including unavailability of facilities, forecast and actual generation of generation units and aggregation thereof including unavailability of units, availability and use of networks, congestion management measures and balancing market data. Rules should include ways in which the information is published, the timing of publication, the entities responsible for handling;

(c) third-party access rules;

(d) operational emergency and restauration procedures in an emergency including system defence plans, restoration plans, market interactions, information exchange and communication and tools and facilities;

(e) sector-specific rules for cyber security aspects of cross-border electricity flows, including rules on common minimum requirements, planning, monitoring, reporting and crisis management.

3. The Commission shall, after consulting ACER, the ENTSO for Electricity, the EU DSO entity and the other relevant stakeholders, establish a priority list every three years, identifying the areas set out in paragraphs 1 and 2 to be included in the development of network codes.

If the subject matter of the network code is directly related to the operation of the distribution system and not primarily relevant to the transmission system, the Commission may require the EU DSO entity, in cooperation with the ENTSO for Electricity, to convene a drafting committee and submit a proposal for a network code to ACER.
4. The Commission shall request ACER to submit non-binding framework guidelines setting out clear and objective principles for the development of network codes relating to the areas identified in the priority list (framework guideline). The request of the Commission may include conditions which the framework guideline shall address. Each framework guideline shall contribute to market integration, non-discrimination, effective competition, and the efficient functioning of the market. Upon a reasoned request from ACER, the Commission may extend the period for submitting the guidelines.

5. ACER shall consult the ENTSO for Electricity, the EU DSO entity, and the other relevant stakeholders in regard to the framework guideline, during a period of no less than two months, in an open and transparent manner.

6. ACER shall submit a non-binding framework guideline to the Commission where requested to do so under paragraph 4.

7. If the Commission considers that the framework guideline does not contribute to market integration, non-discrimination, effective competition and the efficient functioning of the market, it may request ACER to review the framework guideline within a reasonable period and resubmit it to the Commission.

8. If ACER fails to submit or resubmit a framework guideline within the period set by the Commission under paragraph 4 or 7, the Commission shall develop the framework guideline in question.

9. The Commission shall request the ENTSO for Electricity or, where provided for in the priority list referred to in paragraph 3, the EU DSO entity in cooperation with the ENTSO for Electricity, to submit a proposal for a network code in accordance with the relevant framework guideline, to ACER within a reasonable period, not exceeding 12 months, of receipt of the Commission's request.

10. The ENTSO for Electricity, or where provided for in the priority list referred to in paragraph 3 the EU DSO entity, in cooperation with the ENTSO for Electricity, shall convene a drafting committee to support it in the network code development process. The drafting committee shall consist of representatives of ACER, the ENTSO for Electricity, where appropriate the EU DSO entity and NEMOs, and a limited number of the main affected stakeholders. The ENTSO for Electricity or where provided for in the priority list pursuant to paragraph 3 the EU DSO entity, in cooperation with the ENTSO for Electricity, shall develop proposals for network codes in the areas referred to in paragraphs 1 and 2 where so requested by the Commission in accordance with paragraph 9.

11. ACER shall revise the proposed network code to ensure that the network code to be adopted complies with the relevant framework guidelines and contributes to market integration, non-discrimination, effective competition, and the efficient functioning of the market and, submit the revised network code to the Commission within six months of receipt of the proposal. In the proposal submitted to the Commission, ACER shall take into account the views provided by all involved parties during the drafting of the proposal led by the ENTSO for Electricity or the EU DSO entity and shall consult the relevant stakeholders on the version to be submitted to the Commission.
12. Where the ENTSO for Electricity or the EU DSO entity have failed to develop a network code within the period set by the Commission under paragraph 9, the Commission may request ACER to prepare a draft network code on the basis of the relevant framework guideline. ACER may launch a further consultation in the course of preparing a draft network code under this paragraph. ACER shall submit a draft network code prepared under this paragraph to the Commission and may recommend that it be adopted.

13. The Commission may adopt, on its own initiative, where the ENTSO for Electricity or the EU DSO entity have failed to develop a network code, or ACER has failed to develop a draft network code as referred to in paragraph 12, or upon the proposal of ACER under paragraph 11, one or more network codes in the areas listed in paragraphs 1 and 2.

14. Where the Commission proposes to adopt a network code on its own initiative, the Commission shall consult ACER, the ENTSO for Electricity and all relevant stakeholders in regard to the draft network code during a period of no less than two months.

15. This Article shall be without prejudice to the Commission's right to adopt and amend the guidelines as laid down in Article 61. It shall be without prejudice to the possibility for the ENTSO for Electricity to develop non-binding guidance in the areas set out in paragraphs 1 and 2 where such guidance does not relate to areas covered by a request addressed to the ENTSO for Electricity by the Commission. The ENTSO for Electricity shall submit any such guidance to ACER for an opinion and shall duly take that opinion into account.
EMD Regulation

Article 69

Commission reviews and reports

1. By 1 July 2025, the Commission shall review the existing network codes and guidelines in order to assess which of their provisions could be appropriately incorporated into legislative acts of the Union concerning the internal electricity market and how the empowerments for network codes and guidelines laid down in Articles 59 and 61 could be revised.

The Commission shall submit a detailed report of its assessment to the European Parliament and to the Council by the same date.

By 31 December 2026, the Commission shall, where appropriate, submit legislative proposals on the basis of its assessment.

2. By 31 December 2030 30 June 2026 the Commission shall review this Regulation and Directive EU 2019/944, and shall submit a comprehensive report to the European Parliament and to the Council on the basis of that review, accompanied by a legislative proposal where appropriate. The report shall also assess:

a) the effectiveness of the current structure and functioning of the short-term market (EPP 1357),

b) the development of electricity generation capacity and quality of service delivered to final consumers in each Member State (Left 1355),

c) the suitability of the current Union legal and financing framework on distribution grids to deliver on the Union’s renewable and internal energy market objectives (EPP 1357),

The report shall also assess any inefficiencies in the internal electricity market and, where appropriate, submit legislative proposals on European trading platforms for primary and secondary long-term markets, including measures to create liquidity and transparency, such as requirements for producers and costumers to contract minimum amount of products in public, centralised auctions to provide liquidity. (Rapp 137)

3. By 30 June 2024, the Commission shall submit a report to the European Parliament and to the Council assessing different options for the introduction of a temporary relief valve mechanism in view of the experience with those mechanisms at international level and of the evolution and new developments in the Union electricity market. That report shall, where appropriate, be accompanied by a legislative proposal. (Rapp 84)

4. No later than [one month after entry into force of this Regulation], the Commission shall submit to the European Parliament and the Council a detailed report assessing possibilities of streamlining and simplifying the process of applying a capacity mechanism under Chapter IV of this Regulation, so as to ensure that adequacy concerns can be addressed by Member States in a timely manner. In that context, the Commission shall request that the Agency amends the methodology for the European resource adequacy assessment referred to in Article 23 in line with the process set out in Articles 23 and 27, as appropriate.
No later than [three months after entry into force of this Regulation] the Commission shall, after consultation with Member States, come forward with proposals with a view to simplifying the process of assessing capacity mechanisms as appropriate.

5. By 30 June 2024 the Commission, after consultation with Member States, TSOs, the Agency and national regulatory authorities, shall submit to the European Parliament and the Council a detailed assessment on the implications of the introduction of capacity mechanisms as a structural element of the electricity market and its impacts on the functioning of the internal electricity market and its evolution towards a net-zero emission system. This assessment shall be focused, inter alia, on assessing a design of such capacity mechanisms that ensures investments in firm renewable capacity, storage and demand response compatible with the Union’s climate targets. In the light of the conclusions, the Commission shall, if appropriate, accompany this assessment with a legislative proposal amending this Regulation. (SD 1202)
Article 2

Definitions

For the purposes of this Directive, the following definitions apply:

1. ‘customer’ means a wholesale or final customer of electricity;

2. ‘wholesale customer’ means a natural or legal person who purchases electricity for the purpose of resale inside or outside the system where that person is established;

3. ‘final customer’ means a customer who purchases electricity for own use;

4. ‘household customer’ means a customer who purchases electricity for the customer's own household consumption, excluding commercial or professional activities;

5. ‘non-household customer’ means a natural or legal person who purchases electricity that is not for own household use, including producers, industrial customers, small and medium-sized enterprises, businesses and wholesale customers;

6. ‘microenterprise’ means an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 2 million;

7. ‘small enterprise’ means an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed EUR 10 million;

8. ‘active customer’ means a final customer or a group of jointly acting final customers, who consumes or stores electricity generated within its premises located within confined boundaries or, where permitted by a Member State, self-generated or shared electricity within other premises located within the same bidding zone (Rapp 139, Greens 1047), or who sells self-generated electricity or participates in flexibility or energy efficiency schemes, provided that those activities do not constitute its primary commercial or professional activity;

9. ‘electricity markets’ means markets for electricity, including over-the-counter markets and electricity exchanges, markets for the trading of energy, capacity, balancing and ancillary services in all timeframes, including forward, day-ahead and intraday markets;

10. ‘market participant’ means market participant as defined in point (25) of Article 2 of Regulation (EU) 2019/943;

10a. ‘energy sharing’ means the self-consumption by active customers of renewable energy either:

(a) generated or stored offsite or on sites between them by a facility they own, lease, rent in whole or in part; or
(b) the right to which has been transferred to them by another active customer whether free of charge or for a price.


(11) ‘citizen energy community’ means a legal entity that:

(a) is based on voluntary and open participation and is effectively controlled by members or shareholders that are natural persons, local authorities, including municipalities, or small enterprises;

(b) has for its primary purpose to provide environmental, economic or social community benefits to its members or shareholders or to the local areas where it operates rather than to generate financial profits; and

(c) may engage in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders;

(12) ‘supply’ means the sale, including the resale, of electricity to customers;

(13) ‘electricity supply contract’ means a contract for the supply of electricity, but does not include electricity derivatives;

(14) ‘electricity derivative’ means a financial instrument specified in point (5), (6) or (7) of Section C of Annex I to Directive 2014/65/EU of the European Parliament and of the Council (16), where that instrument relates to electricity;

(15) ‘dynamic electricity price contract’ means an electricity supply contract between a supplier and a final customer that reflects the price variation in the spot markets, including in the day-ahead and intraday markets, at intervals at least equal to the market settlement frequency;

(15a) ‘fixed term, fixed price electricity supply contract’ means an electricity supply contract between a supplier and a final customer that guarantees the same contractual conditions during the whole duration of the contract (Rapp 141; RE 1051; Greens 1053; Left 1054), including the price, while it may, within a fixed price, and for customers equipped with smart meters include a flexible element with for example peak and off peak price variations, and where changes in the final bill can only result from elements that are not determined by suppliers, such as taxes and levies (RE 1051);

(16) ‘contract termination fee’ means a charge or penalty imposed on customers by suppliers or market participants engaged in aggregation, for terminating an electricity supply or service contract;

(17) ‘switching-related fee’ means a charge or penalty for changing suppliers or market participants engaged in aggregation, including contract termination fees, that is directly or indirectly imposed on customers by suppliers, market participants engaged in aggregation or system operators;
(18) ‘aggregation’ means a function performed by a natural or legal person who combines multiple customer loads or generated electricity for sale, purchase or auction in any electricity market;

(19) ‘independent aggregator’ means a market participant engaged in aggregation who is not affiliated to the customer's supplier;

(20) ‘demand response’ means the change of electricity load by final customers from their normal or current consumption patterns in response to market signals, including in response to time-variable electricity prices or incentive payments, or in response to the acceptance of the final customer's bid to sell demand reduction or increase at a price in an organised market as defined in point (4) of Article 2 of Commission Implementing Regulation (EU) No 1348/2014 (17), whether alone or through aggregation;

(21) ‘billing information’ means the information provided on a final customer's bill, apart from a request for payment;

(22) ‘conventional meter’ means an analogue or electronic meter with no capability to both transmit and receive data;

(23) ‘smart metering system’ means an electronic system that is capable of measuring electricity fed into the grid or electricity consumed from the grid, providing more information than a conventional meter, and that is capable of transmitting and receiving data for information, monitoring and control purposes, using a form of electronic communication;

(24) ‘interoperability’ means, in the context of smart metering, the ability of two or more energy or communication networks, systems, devices, applications or components to interwork to exchange and use information in order to perform required functions;

(24a) ‘supplier of last resort’ means a supplier who is designated by a Member State to take over the supply of electricity to customers of a supplier which has ceased to operate;

(24 ac) ‘energy poverty’ means energy poverty as defined in Article 2, point (48) of Directive (EU)... [EED Directive]

(25) ‘imbalance settlement period’ means imbalance settlement period as defined in point (15) of Article 2 of Regulation (EU) 2019/943;

(26) ‘near real-time’ means, in the context of smart metering, a short time period, usually down to seconds or up to the imbalance settlement period in the national market;

(27) ‘best available techniques’ means, in the context of data protection and security in a smart metering environment, the most effective, advanced and practically suitable techniques for providing, in principle, the basis for complying with the Union data protection and security rules;

(28) ‘distribution’ means the transport of electricity on high-voltage, medium-voltage and low-voltage distribution systems with a view to its delivery to customers, but does not include supply;
(29) ‘distribution system operator’ means a natural or legal person who is responsible for operating, ensuring the maintenance of and, if necessary, developing the distribution system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity;

(30) ‘energy efficiency’ means the ratio of output of performance, service, goods or energy, to input of energy;

(31) ‘energy from renewable sources’ or ‘renewable energy’ means energy from renewable non-fossil sources or renewable energy as defined in Article 2, point (1), of Directive (EU) 2018/2001, namely wind, solar (solar thermal and solar photovoltaic) and geothermal energy, ambient energy, tide, wave and other ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas, and biogas; (Rapp 140)

(32) ‘distributed generation’ means generating installations connected to the distribution system;

(33) ‘recharging point’ means an interface that is capable of charging one electric vehicle at a time or exchanging the battery of one electric vehicle at a time;

(34) ‘transmission’ means the transport of electricity on the extra high-voltage and high-voltage interconnected system with a view to its delivery to final customers or to distributors, but does not include supply;

(35) ‘transmission system operator’ means a natural or legal person who is responsible for operating, ensuring the maintenance of and, if necessary, developing the transmission system in a given area and, where applicable, its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity;

(36) ‘system user’ means a natural or legal person who supplies to, or is supplied by, a transmission system or a distribution system;

(37) ‘generation’ means the production of electricity;

(38) ‘producer’ means a natural or legal person who generates electricity;

(39) ‘interconnector’ means equipment used to link electricity systems;

(40) ‘interconnected system’ means a number of transmission and distribution systems linked together by means of one or more interconnectors;

(41) ‘direct line’ means either an electricity line linking an isolated generation site with an isolated customer or an electricity line linking a producer and an electricity supply undertaking to supply directly their own premises, subsidiaries and customers;
(42) ‘small isolated system’ means any system that had consumption of less than 3,000 GWh in the year 1996, where less than 5% of annual consumption is obtained through interconnection with other systems;

(43) ‘small connected system’ means any system that had consumption of less than 3,000 GWh in the year 1996, where more than 5% of annual consumption is obtained through interconnection with other systems;

(44) ‘congestion’ means congestion as defined in point (4) of Article 2 of Regulation (EU) 2019/943;

(45) ‘balancing’ means balancing as defined in point (10) of Article 2 of Regulation (EU) 2019/943;

(46) ‘balancing energy’ means balancing energy as defined in point (11) of Article 2 of Regulation (EU) 2019/943;

(47) ‘balance responsible party’ means balance responsible party as defined in point (14) of Article 2 of Regulation (EU) 2019/943;

(48) ‘ancillary service’ means a service necessary for the operation of a transmission or distribution system, including balancing and non-frequency ancillary services, but not including congestion management;

(49) ‘non-frequency ancillary service’ means a service used by a transmission system operator or distribution system operator for steady state voltage control, fast reactive current injections, inertia for local grid stability, short-circuit current, black start capability, and island operation capability and peak shaving;

(50) ‘regional coordination centre’ means a regional coordination centre established pursuant to Article 35 of Regulation (EU) 2019/943;

(51) ‘fully integrated network components’ means network components that are integrated in the transmission or distribution system, including storage facilities, and that are used for the sole purpose of ensuring a secure and reliable operation of the transmission or distribution system, and not for balancing or congestion management;

(52) ‘integrated electricity undertaking’ means a vertically integrated undertaking or a horizontally integrated undertaking;

(53) ‘vertically integrated undertaking’ means an electricity undertaking or a group of electricity undertakings where the same person or the same persons are entitled, directly or indirectly, to exercise control, and where the undertaking or group of undertakings performs at least one of the functions of transmission or distribution, and at least one of the functions of generation or supply;

(54) ‘horizontally integrated undertaking’ means an electricity undertaking performing at least one of the functions of generation for sale, or transmission, or distribution, or supply, and another non-electricity activity;
‘related undertaking’ means affiliated undertakings as defined in point (12) of Article 2 of Directive 2013/34/EU of the European Parliament and of the Council (18), and undertakings which belong to the same shareholders;

‘control’ means rights, contracts or other means which, either separately or in combination and having regard to the considerations of fact or law involved, confer the possibility of exercising decisive influence on an undertaking, in particular by:

(a) ownership or the right to use all or part of the assets of an undertaking;

(b) rights or contracts which confer decisive influence on the composition, voting or decisions of the organs of an undertaking;

‘electricity undertaking’ means a natural or legal person who carries out at least one of the following functions: generation, transmission, distribution, aggregation, demand response, energy storage, supply or purchase of electricity, and who is responsible for the commercial, technical or maintenance tasks related to those functions, but does not include final customers;

‘security’ means both security of supply and provision of electricity, and technical safety;

‘energy storage’ means, in the electricity system, deferring the final use of electricity to a moment later than when it was generated, or the conversion of electrical energy into a form of energy which can be stored, the storing of such energy, and the subsequent reconversion of such energy into electrical energy or use as another energy carrier;

‘energy storage facility’ means, in the electricity system, a facility where energy storage occurs.
Article 4

Free choice of supplier

Member States shall ensure that all customers are free to purchase electricity from the supplier suppliers (Rapp 144) of their choice. Member States shall ensure that all customers are free to have more than one electricity supply contract or an energy sharing agreement (EPP 1078; SD 1079, 1080; Greens1075) at the same time, provided that the required connection and metering points are established and that for this purpose customers are entitled to have more than one metering and billing point covered by the single connection point for their premises unless the existing smart-metering allows those rights. (Rapp 144).

Metering arrangements shall ensure that all suppliers operating at a single connection point are treated in a non-discriminatory manner. Metering arrangements shall be approved by grid operator and shall allow the physical connection point to be split into several energy connection points equally reliable, independent from each other, and with same features and functionalities as single connection points, including balancing responsibility.
Article 11

Entitlement to a fixed term, fixed price and dynamic electricity price contract

1. Member States shall ensure that the national regulatory framework enables suppliers to offer fixed-term, fixed-price contracts and dynamic electricity price contracts. By ... [the date of entry into force of this amending Regulation], Member States shall ensure that final customers who have a smart meter installed can request to conclude a dynamic electricity price contract and that all final customers can request to conclude a fixed-term, fixed-price electricity price contract of a duration of at least one year, with at least one supplier and with every supplier that has more than 200 000 final customers. (Rapp 145)

1a. By way of derogation from article 10(4), Member States shall ensure that suppliers do not modify unilaterally the terms and conditions of fixed-term, fixed-price contracts or terminate them before the end of the contract. (Rapp 148; SD 1091, 1094; RE 1089; Greens 1092; Left 1096)

1b. Member States shall ensure that final customers with fixed-term, fixed-price contracts are not excluded from participating in demand response and energy sharing and from actively contributing to the achievement of the national electricity system flexibility needs.(Rapp 146; EPP 1098; Greens 1075)

1a 1c. Prior to the conclusion or extension of any contract, final customers shall be provided with a summary of the key contractual conditions in a prominent manner and in concise and simple language. This summary shall include at least information on total price, its breakdown and the average price per month over the duration of the contract for fixed-price tariffs (Greens 1100), promotions, additional services, discounts, contract duration and conditions for termination, including notice period and fees and where relevant, penalties; whether the price is fixed or variable, indexed to wholesale prices; one-time payments where relevant; contact details (including customer service’s address, telephone number and email), (Rapp 147; SD 1102; RE 1099; Greens 1100; Left 1101) and include the rights referred to in points (a), (b), (d), (e), and (f) and (h) (Rapp 147) of Article 10(3). The Commission shall provide guidance in this regard.

2. Member States shall ensure that final customers are fully informed by the suppliers of the opportunities, costs and risks of such dynamic electricity price contracts, and shall ensure that suppliers are required to provide information to the final customers accordingly, including with regard to the need to have an adequate electricity meter installed. Member States and regulatory authorities shall monitor the market developments and assess the risks that the new products and services may entail and deal with abusive practices. Regulatory authorities shall evaluate whether any termination fees of the electricity contracts applied are appropriate and shall take measures against any abusive practices. (Rapp 149)

3. Suppliers shall obtain each final customer's consent before that customer is switched to a dynamic electricity price contract.

4. For at least a ten-year period after dynamic electricity price contracts become available, Member States or their regulatory authorities shall monitor, and shall publish an annual report.
on the main developments of such contracts, including market offers and the impact on consumers' bills, and specifically the level of price volatility.
Article 15a

Right to energy sharing

1. All customers, in particular households, small and medium-sized enterprises and public bodies have the right to participate in energy sharing as active customers, within the same bidding zone or a more limited geographical area determined by Member States. The right to participate in energy sharing shall not apply to private enterprises or undertakings whose participation in energy sharing constitutes part of their primary commercial or professional activity (Rapp 150, Greens 1115).

(a) 2. Active customers shall be entitled to share renewable energy between themselves based on private agreements or through a legal entity.

3. Active customers who participate in energy sharing may appoint an energy sharing organiser for communication with grid operators, including through a legal entity. The energy sharing organiser shall be responsible for providing grid operators with all necessary information about energy sharing arrangements, for settling the grid tariffs and applicable taxes and for notifying electricity suppliers at the same connection point about the energy sharing arrangement. (Rapp 151, EPP 1128). The energy sharing organiser shall aim at self-balancing the behind-the-meter flexible loads, distributed renewable generation and storage assets part of an energy sharing arrangement.

(b) 4. Active customers may use a third party that owns or manages storage facilities or renewable energy generation facilities of up to 6 MW capacity each (partly Rapp 152, EPP 1131) or demand management assets (Greens 1132) for installation, operation, including metering and maintenance of a storage or renewable energy generation facility, for the purpose of facilitating energy sharing, without that third party being considered to be an active customer (Rapp 152). Third parties shall be transparent about prices, tariffs, and terms of services, and they shall ensure non-discriminatory services. (EPP 1131)

(c) 5. Member States shall ensure that active customers participating in energy sharing:

(d) (a) are entitled to have the shared electricity netted with injected into the grid deducted from their total metered consumption within a time interval no longer than the imbalance settlement period and without prejudice to applicable non-discriminatory taxes, levies and cost-reflective (Rapp 154, partly Greens 1135) network charges;

(e) (b) benefit from all consumer rights and obligations as final customers under this Directive;

(ba) except in the case of are not required to comply with supplier obligations where energy sharing is shared between households with an installed capacity up to 10.8 kW and up to 50 kW for multi-apartment blocks using peer-to-peer trading agreements used for energy sharing purposes (RE 1141);

(c) Customers engaged in energy sharing agreements foreseeing a remuneration shall be billed based on their actual consumption and shall benefit via a third party from rights on billing and billing information foreseen in Article 18 paragraphs 1, 2, 3, 4 and 5 of this
Directive, and basic contractual rights foreseen in Article 10 that are granted to final electricity customers (SD 1138, partly EPP 1144, Greens 1143);

(f)-(d) have access to voluntary template contracts with fair and transparent terms and conditions for peer-to-peer trading agreements between households, and for agreements on leasing, renting or investing in storage and renewable energy generation facilities for the purpose of energy sharing agreements (Greens 1146, partly Left 1147); in case of conflicts arising over such agreements, final customers engaging in energy sharing or members of energy communities shall have access to out of court dispute settlement for disputes with other participants of energy sharing agreements or within energy communities in accordance with Article 26 (SD 1145);

(g)-(e) are not subject to unfair and discriminatory treatment and charges (SD 1151) by market participants or their balance responsible parties;

(h)-(f) are informed of the possibility for changes in bidding zones in accordance with Article 14 of Regulation (EU) 2019/943 and of the fact that the right to share energy is restricted in accordance with paragraph 1 (based on EPP 1153, ECR 1152).

(g) are allowed to offer different services and participate in a non-discriminatory manner in any market, individually or aggregated through the support of market parties, with the decentralised energy resources involved in energy sharing (Rapp, 159, EPP 1156);

(i) 6. Member States shall ensure that relevant transmission or distribution system operators or other designated bodies:

(jj) (a) monitor, collect, validate and communicate metering data related to the shared electricity with relevant final customers and market participants at least every month, and in accordance with Article 23. To this effect, Member States shall ensure that relevant operators implement the appropriate IT infrastructure within one year of the entrance into force of this Directive (Greens 1159);

(k) (b) provide a relevant contact point establish one-stop shops (EPP 1163) to facilitate and register energy sharing arrangements, to distribute practical information to the public on requirements, available grid connection capacity, timelines for response and other relevant deadlines, inform about available financial support and expertise, available template contracts, (Greens 1161) receive information on relevant metering points, changes in location and participation, and, where applicable, validate calculation methods in a clear, transparent and timely manner.

2. 8. Member States shall take appropriate and non-discriminatory measures to ensure that energy poor and vulnerable households can access energy sharing schemes. Those measures may include financial support measures or production allocation quota.

9. Member States shall ensure that the energy sharing projects owned by public authorities provide that at least 20 % of the amount of shared electricity shared is made accessible to vulnerable customers (Rapp 164, SD 1168, partly Greens 1169).
10. The Commission shall provide additional guidance to the Member States without increasing administrative burden in order to facilitate a standardised approach with regard to renewable energy sharing and ensure a level playing field for renewable energy communities and citizen energy communities (Rapp, 165, Greens 1174) and shall specify through the implementing acts referred to in Article 24(2) of Directive (EU) 2019/944 the rules for the required data exchange between grid operators and with retailers for energy sharing, by specifying existing standards (Rapp 163).

11. Member States shall promote the introduction of plug-in mini-solar systems of up to 800 W capacity in and on buildings, for example on balconies, and remove technical and administrative barriers for consumers. Active customers sharing electricity from a plug-in mini-solar installation of up to 800 W capacity shall be entitled to have the shared electricity injected into the grid deducted from their total metered consumption within a time interval no longer than the imbalance settlement period and without prejudice to applicable non-discriminatory taxes, levies and cost-reflective network charges. Member States may consider exempting the resulting shared electricity from those taxes, levies and cost-reflective network charges. (Based on Greens 1166)
Article 18a
Supplier risk management

1. **By 6 months after entry into force**, and regularly thereafter, National Regulatory Authorities shall perform regular stress tests to verify the ability of suppliers to face major changes in the market dynamics and their technical and economic capacity to ensure resilience (EPP 1182; RE 1180). In addition, in the light of the results of the abovementioned stress tests, National Regulatory Authorities shall, where appropriate, ensure that suppliers have in place and implement appropriate hedging strategies, taking into account the size of the supplier or its market structure, to limit the risk of changes in wholesale electricity supply to the economic viability of their contracts with customers, while maintaining liquidity on and price signals from short-term markets. Member States shall take effective, competitive, non-discriminatory measures to ensure liquidity in hedging markets, including specific measures to avoid the lack of level playing field (Rapp 166). National Regulatory Authorities shall assess the impacts of the possibility of introducing specific hedging targets for specific shares of suppliers' portfolios, including as regards volatility of consumer prices.

2. Supplier hedging strategies may include the use of power purchase agreements or other appropriate instruments, such as forward contracts (EPP 1193). Where sufficiently developed markets for power purchase agreements exist which allow effective competition, Member States may require that a share of suppliers’ risk exposure to changes in wholesale electricity prices is covered using power purchase agreements for electricity generated from renewable energy sources matching the duration of their risk exposure on the consumer side, subject to compliance with Union competition law.

3. Member States shall put in place enabling conditions to ensure the accessibility of hedging products for citizen energy communities and renewable energy communities. (Rapp 167)

4. **Electricity suppliers shall take all reasonable steps to limit their risk of supply failure.** (Left 1211)
Article 27a

Supplier of last resort

1. Where Member States *have not already appointed suppliers of last resort* (Rapp 168, EPP 1204), they shall appoint suppliers of last resort at least for household customers. Suppliers of last resort shall be appointed in a fair, open, transparent and non-discriminatory procedure.

2. Final customers who are transferred to suppliers of last resort shall *not lose continue to benefit from all* their rights as customers, *in particular those rights as laid down in this Directive Articles 4, 10, 11, 12, 14, 18 and 26* (EPP 1206).

3. Member States shall ensure that suppliers of last resort promptly communicate the terms and conditions to transferred customers and ensure seamless continuity of service for those customers for at least 6 months the period needed to find a new supplier. (Rapp 170, Greens 1207)

4. Member States shall ensure that final customers are provided with information *and encouragement* (Rapp 171, Greens 1209) to switch to a market-based offer.

5. Member States may require the supplier of last resort to supply electricity to household customers and SMEs who do not receive market based offers. In such cases, the conditions set out in Article 5 shall apply. (Rapp 172)
Article 28a

Protection from disconnections for vulnerable customers

Member States shall ensure that vulnerable customers are protected from prohibit electricity disconnections of vulnerable household customers and customers affected by or at risk of energy poverty as defined in Article 2, point (48) of Directive [EED] and shall set the thresholds above which a power reduction procedure may be introduced (Rapp 173; AM 1225; Greens 1222). Member States shall ensure that disconnections are prohibited during ongoing judicial or out-of-court disputes between the supplier and customers for a period of eight weeks. This shall be provided as part of the concept of vulnerable customers pursuant to Article 28 (1) of this Directive and without prejudice to the measures set out in Article10(11).

Member States shall complement the provisions of paragraph 1 by adopting specific measures for the winter and summer seasons to enable household customers to manage their consumption and avoid high settlement bills. (Rapp 174)

Member States shall ensure that electricity suppliers regularly invite household customers without smart meters to send self-readings in order to help them manage their consumption and avoid high settlement bills. (RE 1218; Greens 1226)

Member States shall ensure that suppliers do not require household customers unable to pay their energy bills, vulnerable customers and customers affected by or at risk of energy poverty, to use prepayment systems. (Greens 1227; AM 1232)

Member States shall identify appropriate means to guarantee compensation for losses incurred by the relevant suppliers. (EPP 1219)
Tasks of distribution system operators

1. The distribution system operator shall be responsible for ensuring the long-term ability of the system to meet reasonable demands for the distribution of electricity, for operating, maintaining and developing under economic conditions a secure, reliable and efficient electricity distribution system in its area with due regard for the environment and energy efficiency.

2. In any event, the distribution system operator shall not discriminate between system users or classes of system users, particularly in favour of its related undertakings, while taking into account specificities of renewable energy communities and citizen energy communities in their grid connection procedures in order to allow them to obtain access to the distribution system on an equal footing with other market participants. (Greens 1174, 1021, NI 1172).

3. The distribution system operator shall provide system users with the information they need for efficient access to, including use of the system. In particular, the distribution system operator shall publish in a clear and transparent manner information on the capacity available for new connections in its area of operation, including the criteria used to calculate such available capacity (SD 134, EPP 1012, Greens 1013) such as curtailment assumptions (Rapp 133, EPP 1012), the level of self-consumption capacity installed (Rapp 133), topological and electrical characteristics of the grid, the demand and generation (Rapp 133, EPP 1012) for the next five years and (Rapp 133) in congested areas if flexible energy storage connections can be accommodated temporarily until the decided network reinforcements have been accomplished (RE 1240), and update that information regularly, at least quarterly (Rapp 175, Greens 1241).

Distribution system operators shall also provide clear and transparent information to system users about the status and treatment of their connection requests including a timeline of procedures and cost estimates for needed grid reinforcements (Greens 1243). They shall provide such information within a period of three months from the submission of the request and, where the connection is neither granted nor permanently rejected, update that information regularly, at least monthly (Based on RE 1242).

Distribution system operators shall provide system users the option to request grid connection and submit relevant documents exclusively in digital form. The Commission shall review the national standards by ... [12 months after the date entry into force of this amending Regulation] and shall submit a proposal for harmonised standards. (Rapp 176)

4. A Member State may require the distribution system operator, when dispatching generating installations, to give priority to generating installations using renewable sources or using high-efficiency cogeneration, in accordance with Article 12 of Regulation (EU) 2019/943.
5. Each distribution system operator shall act as a neutral market facilitator in procuring the energy it uses to cover energy losses in its system in accordance with transparent, non-discriminatory and market-based procedures, where it has such a function.

6. Where a distribution system operator is responsible for the procurement of products and services necessary for the efficient, reliable and secure operation of the distribution system, rules adopted by the distribution system operator for that purpose shall be objective, transparent and non-discriminatory, and shall be developed in coordination with transmission system operators and other relevant market participants. The terms and conditions, including rules and tariffs, where applicable, for the provision of such products and services to distribution system operators shall be established in accordance with Article 59(7) in a non-discriminatory and cost-reflective way and shall be published.

7. In performing the tasks referred to in paragraph 6, the distribution system operator shall procure the non-frequency ancillary services needed for its system in accordance with transparent, non-discriminatory and market-based procedures, unless the regulatory authority has assessed that the market-based provision of non-frequency ancillary services is economically not efficient and has granted a derogation. The obligation to procure non-frequency ancillary services does not apply to fully integrated network components.

8. The procurement of the products and services referred to in paragraph 6 shall ensure the effective participation of all qualified market participants, including market participants offering energy from renewable sources, market participants engaged in demand response, operators of energy storage facilities and market participants engaged in aggregation, in particular by requiring regulatory authorities and distribution system operators in close cooperation with all market participants, as well as transmission system operators, to establish the technical requirements for participation in those markets on the basis of the technical characteristics of those markets and the capabilities of all market participants.

9. Distribution system operators shall cooperate with transmission system operators for the effective participation of market participants connected to their grid in retail, wholesale and balancing markets. Delivery of balancing services stemming from resources located in the distribution system shall be agreed with the relevant transmission system operator in accordance with Article 57 of Regulation (EU) 2019/943 and Article 182 of Commission Regulation (EU) 2017/1485 (24).

10. Member States or their designated competent authorities may allow distribution system operators to perform activities other than those provided for in this Directive and in Regulation (EU) 2019/943, where such activities are necessary for the distribution system operators to fulfill their obligations under this Directive or Regulation (EU) 2019/943, provided that the regulatory authority has assessed the necessity of such a derogation. This paragraph shall be without prejudice to the right of the distribution system operators to own, develop, manage or operate networks other than electricity networks where the Member State or the designated competent authority has granted such a right.
Article 33
Integration of electromobility into the electricity network

in Article 33, paragraph 1 is replaced by the following:

‘1. Without prejudice to Directive 2014/94/EU of the European Parliament and of the Council, Member States shall provide the necessary regulatory framework to facilitate the connection of publicly accessible and private recharging points with smart charging functionalities and bidirectional charging functionalities in accordance with Article 20a of Directive (EU) 2018/2001 (Rapp 177) to the distribution networks. Member States shall ensure that distribution system operators cooperate on a non-discriminatory basis with any undertaking that owns, develops, operates or manages recharging points for electric vehicles, including with regard to connection to the grid. Member States shall ensure that distribution system operators connect system users within six months when no grid reinforcement is needed, and one year, if reinforcement is needed (Greens 597), without prejudice to the relevant public consultation and environmental impact assessments where applicable (The Left).
Article 59

Duties and powers of the regulatory authorities

1. The regulatory authority shall have the following duties:

(a) fixing or approving, in accordance with transparent criteria, transmission or distribution tariffs or their methodologies, or both;

(b) ensuring the compliance of transmission system operators and distribution system operators and, where relevant, system owners, as well as the compliance of any electricity undertakings and other market participants, with their obligations under this Directive, Regulation (EU) 2019/943, the network codes and the guidelines adopted pursuant to Articles 59, 60 and 61 of Regulation (EU) 2019/943, and other relevant Union law, including as regards cross-border issues, as well as with ACER's decisions;

(c) in close coordination with the other regulatory authorities, ensuring the compliance of the single allocation platform established in accordance with Regulation (EU) 2016/1719, the ENTSO for Electricity and the EU DSO entity with their obligations under this Directive, Regulation (EU) 2019/943, the network codes and guidelines adopted pursuant to Articles 59, 60 and 61 of Regulation (EU) 2019/943, and other relevant Union law, including as regards cross-border issues, as well as with ACER's decisions, and jointly identifying non-compliance of the single allocation platform, the ENTSO for Electricity and the EU DSO entity with their respective obligations; where the regulatory authorities have not been able to reach an agreement within a period of four months after the start of consultations for the purpose of jointly identifying non-compliance, the matter shall be referred to the ACER for a decision, pursuant to Article 6(10) of Regulation (EU) 2019/942;

(d) approving products and procurement process for non-frequency ancillary services;

(e) implementing the network codes and guidelines adopted pursuant to Articles 59, 60 and 61 of Regulation (EU) 2019/943 through national measures or, where so required, coordinated regional or Union-wide measures;

(f) cooperating in regard to cross-border issues with the regulatory authority or authorities of the Member States concerned and with ACER, in particular through participation in the work of ACER's Board of Regulators pursuant to Article 21 of Regulation (EU) 2019/942;

(g) complying with, and implementing, any relevant legally binding decisions of the Commission and of ACER;

(h) ensuring that transmission system operators make available interconnector capacities to the utmost extent pursuant to Article 16 of Regulation (EU) 2019/943;
(i) reporting annually on its activity and the fulfilment of its duties to the relevant authorities of the Member States, the Commission and ACER, including on the steps taken and the results obtained as regards each of the tasks listed in this Article;

(j) ensuring that there is no cross-subsidisation between transmission, distribution and supply activities or other electricity or non-electricity activities;

(k) monitoring investment plans of the transmission system operators and providing in its annual report an assessment of the investment plans of the transmission system operators as regards their consistency with the Union-wide network development plan; such assessment may include recommendations to amend those investment plans;

(l) monitoring and assessing the performance of transmission system operators and distribution system operators in relation to the development of a smart grid that promotes energy efficiency and the integration of energy from renewable sources, based on a limited set of indicators, and publish a national report every two years, including recommendations;

(m) setting or approving standards and requirements for quality of service and quality of supply or contributing thereto together with other competent authorities and monitoring compliance with and reviewing the past performance of network security and reliability rules;

(n) monitoring the level of transparency, including of wholesale prices, and ensuring compliance of electricity undertakings with transparency obligations;

(o) monitoring the level and effectiveness of market opening and competition at wholesale and retail levels, including on electricity exchanges, prices for household customers including prepayment systems, the impact of dynamic electricity price contracts and of the use of smart metering systems, switching rates, disconnection rates, charges for maintenance services, the execution of maintenance services, the relationship between household and wholesale prices, the evolution of grid tariffs and levies, and complaints by household customers, as well as any distortion or restriction of competition, including by providing any relevant information, and bringing any relevant cases to the relevant competition authorities;

(p) monitoring the occurrence of restrictive contractual practices, including exclusivity clauses which may prevent customers from contracting simultaneously with more than one supplier or restrict their choice to do so, and, where appropriate, informing the national competition authorities of such practices;

(q) monitoring the time taken by transmission system operators and distribution system operators to make connections and repairs;

(r) helping to ensure, together with other relevant authorities, that the consumer protection measures are effective and enforced;

(s) publishing recommendations, at least annually, in relation to compliance of supply prices with Article 5, and providing those recommendations to the competition authorities, where appropriate;
(t) ensuring non-discriminatory access to customer consumption data, the provision, for optional use, of an easily understandable harmonised format at national level for consumption data, and prompt access for all customers to such data pursuant to Articles 23 and 24;

(u) monitoring the implementation of rules relating to the roles and responsibilities of transmission system operators, distribution system operators, suppliers, customers and other market participants pursuant to Regulation (EU) 2019/943;

(v) monitoring investment in generation and storage capacities in relation to security of supply;

(w) monitoring technical cooperation between Union and third-country transmission system operators;

(x) contributing to the compatibility of data exchange processes for the most important market processes at regional level;

(y) monitoring the availability of comparison tools that meet the requirements set out in Article 14;

(z) The regulatory authority shall have the following duties: (Rapp 178) monitoring the removal of unjustified obstacles to and restrictions on the development, production, storage, of consumption and selling of self-generated or shared electricity, renewable energy communities (Greens 1261) and citizen energy communities, including related to obstacles and restrictions preventing (Rapp 178) the connection of flexible distributed energy generation within a reasonable time in accordance with Article 58(d).

2. Where a Member State has so provided, the monitoring duties set out in paragraph 1 may be carried out by other authorities than the regulatory authority. In such a case, the information resulting from such monitoring shall be made available to the regulatory authority as soon as possible.

While preserving their independence, without prejudice to their own specific competence and consistent with the principles of better regulation, the regulatory authority shall, as appropriate, consult transmission system operators and, as appropriate, closely cooperate with other relevant national authorities when carrying out the duties set out in paragraph 1.

Any approvals given by a regulatory authority or ACER under this Directive are without prejudice to any duly justified future use of its powers by the regulatory authority under this Article or to any penalties imposed by other relevant authorities or the Commission.

3. Member States shall ensure that regulatory authorities are granted the powers enabling them to carry out the duties referred to in this Article in an efficient and expeditious manner. For this purpose, the regulatory authority shall have at least the following powers:

(a) to issue binding decisions on electricity undertakings;

(b) to carry out investigations into the functioning of the electricity markets, and to decide upon and impose any necessary and proportionate measures to promote effective competition and ensure the proper functioning of the market. Where appropriate, the regulatory authority
shall also have the power to cooperate with the national competition authority and the financial market regulators or the Commission in conducting an investigation relating to competition law;

c) to require any information from electricity undertakings relevant for the fulfilment of its tasks, including the justification for any refusal to grant third-party access, and any information on measures necessary to reinforce the network;

d) to impose effective, proportionate and dissuasive penalties on electricity undertakings not complying with their obligations under this Directive, Regulation (EU) 2019/943 or any relevant legally binding decisions of the regulatory authority or of ACER, or to propose that a competent court impose such penalties, including the power to impose or propose the imposition of penalties of up to 10% of the annual turnover of the transmission system operator on the transmission system operator or of up to 10% of the annual turnover of the vertically integrated undertaking on the vertically integrated undertaking, as the case may be, for non-compliance with their respective obligations pursuant to this Directive; and

e) appropriate rights of investigation and relevant powers of instruction for dispute settlement under Article 60(2) and (3).

4. The regulatory authority located in the Member State in which the single allocation platform, the ENTSO for Electricity or the EU DSO entity has its seat shall have the power to impose effective, proportionate and dissuasive penalties on those entities where they do not comply with their obligations under this Directive, Regulation (EU) 2019/943 or any relevant legally binding decisions of the regulatory authority or of ACER, or to propose that a competent court impose such penalties.

5. In addition to the duties conferred upon it under paragraphs 1 and 3 of this Article, when an independent system operator has been designated under Article 44, the regulatory authority shall:

(a) monitor the transmission system owner's and the independent system operator's compliance with their obligations under this Article, and issue penalties for non-compliance in accordance with point (d) of paragraph 3;

(b) monitor the relations and communications between the independent system operator and the transmission system owner so as to ensure compliance of the independent system operator with its obligations, and in particular approve contracts and act as a dispute settlement authority between the independent system operator and the transmission system owner with respect to any complaint submitted by either party pursuant to Article 60(2);

(c) without prejudice to the procedure under point (c) of Article 44(2), for the first ten-year network development plan, approve the investments planning and the multi-annual network development plan submitted at least every two years by the independent system operator;

(d) ensure that network access tariffs collected by the independent system operator include remuneration for the network owner or network owners, which provides for adequate remuneration of the network assets and of any new investments made therein, provided they are economically and efficiently incurred;
have the powers to carry out inspections, including unannounced inspections, at the premises of transmission system owner and independent system operator; and

monitor the use of congestion charges collected by the independent system operator in accordance with Article 19(2) of Regulation (EU) 2019/943.

6. In addition to the duties and powers conferred on it under paragraphs 1 and 3 of this Article, when a transmission system operator has been designated in accordance with Section 3 of Chapter VI, the regulatory authority shall be granted at least the following duties and powers:

(a) to impose penalties in accordance with point (d) of paragraph 3 for discriminatory behaviour in favour of the vertically integrated undertaking;

(b) to monitor communications between the transmission system operator and the vertically integrated undertaking so as to ensure compliance of the transmission system operator with its obligations;

(c) to act as dispute settlement authority between the vertically integrated undertaking and the transmission system operator with respect to any complaint submitted pursuant to Article 60(2);

(d) to monitor commercial and financial relations including loans between the vertically integrated undertaking and the transmission system operator;

(e) to approve all commercial and financial agreements between the vertically integrated undertaking and the transmission system operator on the condition that they comply with market conditions;

(f) to request a justification from the vertically integrated undertaking when notified by the compliance officer in accordance with Article 50(4), such justification including, in particular, evidence demonstrating that no discriminatory behaviour to the advantage of the vertically integrated undertaking has occurred;

(g) to carry out inspections, including unannounced ones, on the premises of the vertically integrated undertaking and the transmission system operator; and

(h) to assign all or specific tasks of the transmission system operator to an independent system operator appointed in accordance with Article 44 in the case of a persistent breach by the transmission system operator of its obligations under this Directive, in particular in the case of repeated discriminatory behaviour to the benefit of the vertically integrated undertaking.

7. The regulatory authorities, except where ACER is competent to fix and approve the terms and conditions or methodologies for the implementation of network codes and guidelines under Chapter VII of Regulation (EU) 2019/943 pursuant to Article 5(2) of Regulation (EU) 2019/942 because of their coordinated nature, shall be responsible for fixing or approving sufficiently in advance of their entry into force at least the national methodologies used to calculate or establish the terms and conditions for:
(a) connection and access to national networks, including transmission and distribution tariffs or their methodologies, those tariffs or methodologies shall allow the necessary investments in the networks to be carried out in a manner allowing those investments to ensure the viability of the networks;

(b) the provision of ancillary services which shall be performed in the most economic manner possible and provide appropriate incentives for network users to balance their input and off-takes, such ancillary services shall be provided in a fair and non-discriminatory manner and be based on objective criteria; and

(c) access to cross-border infrastructures, including the procedures for the allocation of capacity and congestion management.

8. The methodologies or the terms and conditions referred to in paragraph 7 shall be published.

9. With a view to increasing transparency in the market and providing all interested parties with all necessary information and decisions or proposals for decisions concerning transmission and distribution tariffs as referred in Article 60(3), regulatory authorities shall make publicly available the detailed methodology and underlying costs used for the calculation of the relevant network tariffs, while preserving the confidentiality of commercially sensitive information.

10. The regulatory authorities shall monitor congestion management of national electricity systems including interconnectors, and the implementation of congestion management rules. To that end, transmission system operators or market operators shall submit their congestion management rules, including capacity allocation, to the regulatory authorities. Regulatory authorities may request amendments to those rules.
Article 66a

Access to affordable energy during an electricity price crisis

1. The Commission shall may by decision (Rapp 179) declare a regional or Union-wide electricity price crisis, except in duly justified circumstances, if the following conditions are met:
   (a) very high prices in wholesale electricity markets at least two and a half times the average price during the previous 5 years, and at least 180 €/MWh (EPP 1279, SD 1278), which is expected to continue for at least 6 months (Rapp 180); and
   (b) sharp increases in electricity retail prices of at least 20% 60% of the previous two years average (EPP 1290, RE 1291) occur which are expected to continue for at least 6 months; and.
   (c) the wider economy is being negatively affected by the increases in electricity prices.

2. The Commission shall specify in its decision declaring a regional or Union-wide electricity price crisis the period of validity of that decision which may be for a period of up to one year. If conditions mentioned under paragraph 1 are still met, the Commission shall issue a decision extending the duration of the electricity price crisis no later than two months before the end of the validity of the initial decision. If an extension is not foreseen, the Commission shall propose recommendations on a gradual phase-out of public interventions. (SD 1302)

2a. The declaration of a regional or Union-wide electricity price crisis shall ensure a level playing field across all Member States affected by the decision so that the internal market is not unduly distorted. (Rapp 183)

3. Where the Commission has adopted a decision pursuant to paragraph 1, Member States may for the duration of the validity of that decision apply temporary targeted public interventions in price setting for the supply of electricity to small and medium sized enterprises and electro-intensive industrial consumers (EPP 1311, 1313, 1314; SD 1318; Left 1316). Such public interventions shall:
   (a) be limited to at most 70% of the beneficiary's consumption during the same period of the previous year and retain an incentive for demand reduction;
   (b) comply with the conditions set out in Article 5(4) and (7);
   (c) where relevant, comply with the conditions set out in Paragraph 4;
   (d) be designed to minimise any negative fragmentation of competition in the Union.

4. Where the Commission has adopted a decision pursuant to paragraph 1, Member States may for the duration of the validity of that decision, by way of derogation from Article 5(7), point (c), when applying targeted public interventions in price setting for the supply of electricity pursuant to Article 5(6) or paragraph 3 of this Article, exceptionally and temporarily set a price for the supply of electricity which is below cost provided that the following conditions are fulfilled:
(a) the price set for households only applies to at most 80% of median household consumption and retains an incentive for demand reduction and applies to 100% for vulnerable household customers affected by or at risk of energy poverty (Rapp 184; EPP 1338; Greens 1337);
(b) there is no discrimination between suppliers;
(c) suppliers are compensated for supplying below cost in a transparent and non-discriminatory way (EPP 1345; ECR 1346); and
(d) all suppliers are eligible to provide offers for the price for the supply of electricity which is below cost on the same basis; and
(e) measures proposed do not distort the internal electricity market (EPP 1349).

4b. The Commission shall continuously assess and publish on a regular basis the results of such assessments in order to monitor the impacts resulting from the measures adopted under the declared electricity price crisis. (EPP 1353)
Article 4

Support schemes for energy from renewable sources

1. In order to reach or exceed the Union target set in Article 3(1), and each Member State's contribution to that target set at a national level for the deployment of renewable energy, Member States may apply support schemes.

2. Support schemes for electricity from renewable sources shall provide incentives for the integration of electricity from renewable sources in the electricity market in a market-based and market-responsive way, while avoiding unnecessary distortions of electricity markets as well as taking into account possible system integration costs and grid stability.

3. Support schemes for electricity from renewable sources shall be designed so as to maximise the integration of electricity from renewable sources in the electricity market and to ensure that renewable energy producers are responding to market price signals and maximise their market revenues.

To that end, with regard to direct price support schemes, support shall be granted in the form of a market premium, which could be, inter alia, sliding or fixed.

4. Member States shall ensure that support for electricity from renewable sources is granted in an open, transparent, competitive, non-discriminatory and cost-effective manner.

Member States may exempt small-scale installations and demonstration projects from tendering procedures.

Member States may also consider establishing mechanisms to ensure the regional diversification in the deployment of renewable electricity, in particular to ensure cost-efficient system integration.

5. Member States may limit tendering procedures to specific technologies where opening support schemes to all producers of electricity from renewable sources would lead to a suboptimal result, in view of:

(a) the long-term potential of a particular technology;
(b) the need to achieve diversification;

(c) grid integration costs;

(d) network constraints and grid stability;

(e) for biomass, the need to avoid distortions of raw materials markets.

6. Where support for electricity from renewable sources is granted by means of a tendering procedure, Member States shall, in order to ensure a high project realisation rate:

(a) establish and publish non-discriminatory and transparent criteria to qualify for the tendering procedure and set clear dates and rules for delivery of the project;

(b) publish information about previous tendering procedures, including project realisation rates.

7. In order to increase the generation of energy from renewable sources in the outermost regions and small islands, Member States may adapt financial support schemes for projects located in those regions in order to take into account the production costs associated with their specific conditions of isolation and external dependence.

8. By 31 December 2021 and every three years thereafter, the Commission shall report to the European Parliament and to the Council on the performance of support for electricity from renewable sources granted by means of tendering procedures in the Union, analysing in particular the ability of tendering procedures to:

(a) achieve cost-reduction;

(b) achieve technological improvement;

(c) achieve high realisation rates;

(d) provide non-discriminatory participation of small actors and, where applicable, local authorities;

(e) limit environmental impact;

(f) ensure local acceptability;

(g) ensure security of supply and grid integration.

9. This Article shall apply without prejudice to Articles 107 and 108 TFEU.
Article 36

Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with Articles 2 to 13, 15 to 31 and 37 and Annexes II, III and V to IX, by 30 June 2021. However, Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with Article 4(3), second third subparagraph, by [six months after entry into force of this Regulation].

They shall immediately communicate the text of those measures to the Commission.

When Member States adopt those measures, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. They shall also include a statement that references in existing laws, regulations and administrative provisions to the Directive repealed by this Directive shall be construed as references to this Directive. Member States shall determine how such reference is to be made and how that statement is to be formulated.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

3. This Directive shall not affect the application of the derogations pursuant to Union law on the internal market for electricity.