Regulation (EU) 2019/943 of the European Parliament and of the Council

of 5 June 2019

on the internal market for electricity

(recast)

(Text with EEA relevance)

Introductory Text

CHAPTER I - SUBJECT MATTER, SCOPE AND DEFINITIONS

Article 1 Subject matter and scope
Article 2 Definitions

CHAPTER II - GENERAL RULES FOR THE ELECTRICITY MARKET

Article 3 Principles regarding the operation of electricity markets
Article 4 Just transition
Article 5 Balance responsibility
Article 6 Balancing market
Article 7 Day-ahead and intraday markets
Article 8 Trade on day-ahead and intraday markets
Article 9 Forward markets
Article 10 Technical bidding limits
Article 11 Value of lost load
Article 12 Dispatching of generation and demand response
Article 13 Redispatching

CHAPTER III - NETWORK ACCESS AND CONGESTION MANAGEMENT

SECTION 1 - Capacity Allocation

Article 14 Bidding zone review
Article 15 Action plans
Article 16 General principles of capacity allocation and congestion management
Article 17 Allocation of cross-zonal capacity across timeframes

SECTION 2 - Network charges and congestion income

Article 18 Charges for access to networks, use of networks and reinforcement
Article 19 Congestion income

CHAPTER IV - RESOURCE ADEQUACY

Article 20 Resource adequacy in the internal market for electricity
Article 21 General principles for capacity mechanisms

Article 22 Design principles for capacity mechanisms
Article 23 European resource adequacy assessment
Article 24 National resource adequacy assessments
Article 25 Reliability standard
Article 26 Cross-border participation in capacity mechanisms
Article 27 Approval procedure

CHAPTER V - TRANSMISSION SYSTEM OPERATION

Article 28 European network of transmission system operators for electricity
Article 29 The ENTSO for Electricity
Article 30 Tasks of the ENTSO for Electricity
Article 31 Consultations
Article 32 Monitoring by ACER
Article 33 Costs
Article 34 Regional cooperation of transmission system operators
Article 35 Establishment and mission of regional coordination centres
Article 36 Geographical scope of regional coordination centres
Article 37 Tasks of regional coordination centres
Article 38 Cooperation within and between regional coordination centres
Article 39 Working arrangements
Article 40 Consultation procedure
Article 41 Transparency
Article 42 Adoption and review of coordinated actions and recommendations
Article 43 Management board of regional coordination centres
Article 44 Organisational structure
Article 45 Equipment and staff
Article 46 Monitoring and reporting
Article 47 Liability
Article 48 Ten-year network development plan
Article 49 Inter-transmission system operator compensation mechanism
Article 50 Provision of information
Article 51 Certification of transmission system operators

CHAPTER VI - DISTRIBUTION SYSTEM OPERATION

Article 52 European entity for distribution system operators
Article 53 Establishment of the EU DSO entity
Article 54 Principal rules and procedures for the EU DSO entity
Article 55 Tasks of the EU DSO entity
Article 56 Consultations in the network code development process
Article 57 Cooperation between distribution system operators and transmission system operators

CHAPTER VII - NETWORK CODES AND GUIDELINES

Article 58 Adoption of network codes and guidelines
Article 59 Establishment of network codes
Article 60 Amendments of network codes
Article 61 Guidelines
Article 62 Right of Member States to provide for more detailed measures

CHAPTER VIII - FINAL PROVISIONS

Article 63 New interconnectors
Article 64 Derogations

Article 65 Provision of information and confidentiality
Article 66 Penalties
Article 67 Committee procedure
Article 68 Exercise of the delegation
Article 69 Commission reviews and reports
Article 70 Repeal
Article 71 Entry into force

ANNEX I - TASKS OF REGIONAL COORDINATION CENTRES

ANNEX II - REPEALED REGULATION WITH LIST OF THE SUCCESSIVE AMENDMENTS THERETO

ANNEX III - CORRELATION TABLE

Regulation (EU) 2019/943 of the European Parliament and of the Council

of 5 June 2019

on the internal market for electricity

(recast)

(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) Regulation (EC) No 714/2009 of the European Parliament and of the Council has been substantially amended several times. Since further amendments are to be made, that Regulation should be recast in the interests of clarity.

(2) The Energy Union aims to provide final customers – household and business – with safe, secure, sustainable, competitive and affordable energy. Historically, the electricity system was dominated by vertically integrated, often publicly owned, monopolies with large centralised nuclear or fossil fuel power plants. The internal market for electricity, which has been progressively implemented since

1999, aims to deliver a real choice for all consumers in the Union new business opportunities and more cross-border trade, so as to achieve efficiency gains, competitive prices and higher standards of service, and to contribute to security of supply and sustainability. The internal market for electricity has increased competition, in particular at the wholesale level, and cross-zonal trade. It remains the foundation of an efficient energy market.

(3) The Union's energy system is in the middle of its most profound change in decades and the electricity market is at the heart of that change. The common goal of decarbonising the energy system creates new opportunities and challenges for market participants. At the same time, technological developments allow for new forms of consumer participation and cross-border cooperation.

(4) This Regulation establishes rules to ensure the functioning of the internal market for electricity and includes requirements related to the development of renewable forms of energy and environmental policy, in particular specific rules for certain types of renewable power-generating facilities, concerning balancing responsibility, dispatch and redispatching, as well as a threshold for CO_2 emissions of new generation capacity where such capacity is subject to temporary measures to ensure the necessary level of resource adequacy, namely, capacity mechanisms.

(5) Electricity from renewable sources from small power-generating facilities should be granted priority dispatch either via a specific priority order in the dispatching methodology or via legal or regulatory requirements for market operators to provide this electricity on the market. Priority dispatch which has been granted in the system operation services under the same economic conditions should be considered to comply with this Regulation. In any case, priority dispatch should be deemed to be compatible with the participation in the electricity market of power-generating facilities using renewable energy sources.

(6) State interventions, often designed in an uncoordinated manner, have led to increasing distortions of the wholesale electricity market, with negative consequences for investments and cross-border trade.

(7) In the past, electricity customers were purely passive, often buying electricity at regulated prices which had no direct relation to the market. In the future, customers need to be enabled to fully participate in the market on equal footing with other market participants and need to be empowered to manage their energy consumption. To integrate the growing share of renewable energy, the future electricity system should make use of all available sources of flexibility, particularly demand side solutions and energy storage, and should make use of digitalisation through the integration of innovative technologies with the electricity system. To achieve effective decarbonisation at the lowest cost, the future electricity system also needs to encourage energy efficiency. The completion of the internal energy market through the effective integration of renewable energy can drive investments in the long term and can contribute to delivering the objectives of the Energy Union and the 2030 climate and energy framework, as set out in the Commission communication of 22 January 2014 entitled ‘A policy framework for climate and energy in the period from 2020 to 2030’, and endorsed in the conclusions adopted by the European Council at its meeting on 23 and 24 October 2014.

(8) More market integration and the change towards a more volatile electricity production requires increased efforts to coordinate national energy policies with neighbours and to use the opportunities of cross-border electricity trade.

(9) Regulatory frameworks have developed, allowing electricity to be traded across the Union. That development has been supported by the adoption of several network codes and guidelines for the integration of the electricity markets. Those network codes and guidelines contain provisions on market rules, system operation and network connection. To ensure full transparency and increase legal certainty, the main principles of market functioning and capacity allocation in the balancing, intraday, day-ahead and forward market timeframes should also be adopted pursuant to the ordinary legislative procedure and incorporated in a Union legislative single act.

(10) Article 13 of Commission Regulation (EU) 2017/2195 establishes a process whereby transmission system operators are able to delegate all or part of their tasks to a third party. The delegating transmission system operators should remain responsible for ensuring compliance with this Regulation. Moreover, Member States should be able to assign tasks and obligations to a third party. Such assignment should be limited to tasks and obligations carried out at national level, such as imbalance settlement. The limitations on such assignment should not lead to unnecessary changes to existing national arrangements. However, transmission system operators should remain responsible for the tasks entrusted to them under Article 40 of Directive (EU) 2019/944 of the European Parliament and of the Council.

(11) With regard to balancing markets, efficient and non-distortive price formation in the procurement of balancing capacity and balancing energy requires that balancing capacity contracts do not set the price for balancing energy. This is without prejudice for the dispatching systems using an integrated

scheduling process in accordance with Regulation (EU) 2017/2195

(12) Articles 18, 30 and 32 of Regulation (EU) 2017/2195 establish that the pricing method for both standard and specific products for balancing energy should create positive incentives for market participants in keeping their own balance or helping to restore the system balance in their imbalance price area, thereby reducing system imbalances and costs to society. Such pricing approaches should strive for the economically efficient use of demand response and other balancing resources, subject to operational security limits.

(13) The integration of balancing energy markets should facilitate the efficient functioning of the intraday market in order to provide the possibility for market participants to balance themselves as closely as possible to real time, enabled by the balancing energy gate closure times provided for in Article 24 of Regulation (EU) 2017/2195. Only the imbalances remaining after the end of the intraday market should be balanced by transmission system operators in the balancing market. Article 53 of Regulation (EU) 2017/2195 also provides for the harmonisation of the imbalance settlement period at 15 minutes in the Union. That harmonisation is intended to support intraday trading and foster the development of a number of trading products with the same delivery windows.

(14) In order to enable transmission system operators to procure and use balancing capacity in an efficient, economic and market-based manner, there is a need to foster market integration. In that regard, Title IV of Regulation (EU) 2017/2195 establishes three methodologies through which transmission system operators are entitled to allocate cross-zonal capacity for the exchange of balancing capacity and the sharing of reserves, when supported on the basis of a cost-benefit analysis: the co-optimisation process, the market-based allocation process and the allocation based on an economic efficiency analysis. The co-optimisation allocation process is to be performed on a day-ahead basis. By contrast, it is possible to perform the market-based allocation process where the contracting is carried out not more than one week in advance of the provision of the balancing capacity and to perform the allocation based on an economic efficiency analysis where the contracting is done more than one week in advance of the provision of the balancing capacity, provided that the volumes allocated are limited and that an assessment is carried out annually. Once a methodology for the process of allocating cross-zonal capacity is approved by the relevant regulatory authorities, early application of that methodology by two or more transmission system operators could take place to allow them to gain experience and to allow for the smooth application of that methodology by more transmission system operators in the future. The application of such methodologies should nevertheless be harmonised by all transmission system operators in order to foster market integration.

(15) Title V of Regulation (EU) 2017/2195 established that the general objective of imbalance settlement is to ensure that balance responsible parties keep their own balance or help restore the system balance in an efficient way and to provide incentives to market participants for keeping or helping to restore the system balance. To make balancing markets and the overall energy system fit for the integration of the increasing share of variable renewable energy, imbalance prices should reflect the real-time value of energy. All market participants should be financially responsible for the imbalances they cause in the system, representing the difference between the allocated volume and the final position in the market. For demand response aggregators, the allocated volume consists of the volume of energy physically activated by the participating customers' load, based on a defined measurement and baseline methodology.

(16) Commission Regulation (EU) 2015/1222 sets out detailed guidelines on cross-zonal capacity allocation and congestion management in the day-ahead and intraday markets, including the requirements for the establishment of common methodologies for determining the volumes of capacity simultaneously available between bidding zones, criteria to assess efficiency and a review process for defining bidding zones. Articles 32 and 34 of Regulation (EU) 2015/1222 set out rules on review of bidding zone configuration, Articles 41 and 54 thereof set out harmonised limits on maximum and minimum clearing prices for day-ahead and intraday timeframes, Article 59 thereof sets out rules on intraday cross-zonal gate closure times, whereas Article 74 thereof sets out rules on redispatching and countertrading cost sharing methodologies.

(17) Commission Regulation (EU) 2016/1719 sets out detailed rules on cross-zonal capacity allocation in the forward markets, on the establishment of a common methodology to determine long-term cross-zonal capacity, on the establishment of a single allocation platform at European level offering long-term transmission rights, and on the possibility to return long-term transmission rights for subsequent forward capacity allocation or to transfer long-term transmission rights between market participants. Article 30 of Regulation (EU) 2016/1719 sets out rules on forward hedging products.

(18) Commission Regulation (EU) 2016/631 sets out the requirements for grid connection of power-generating facilities to the interconnected system, in particular with respect to synchronous power-

generating modules, power park modules and offshore power park modules. Those requirements help to ensure fair conditions of competition in the internal electricity market, to ensure system security and the integration of electricity from renewable sources, and to facilitate Union-wide trade in electricity. Articles 66 and 67 of Regulation (EU) 2016/631 set out rules for emerging technologies in electricity generation.

(19) Bidding zones reflecting supply and demand distribution are a cornerstone of market-based electricity trading and are a prerequisite for reaching the full potential of capacity allocation methods including the flow-based approach. Bidding zones therefore should be defined in a manner to ensure market liquidity, efficient congestion management and overall market efficiency. When a review of an existing bidding zone configuration is launched by a single regulatory authority or transmission system operator with the approval of its competent regulatory authority, for the bidding zones inside the transmission system operator's control area, if the bidding zone configuration has negligible impact on neighbouring transmission system operators' control areas, including interconnectors, and the review of bidding zone configuration is necessary to improve efficiency, to maximise cross-border trading opportunities or to maintain operational security, the transmission system operator in the relevant control area and the competent regulatory authority should be, respectively, the only transmission system operator and the only regulatory authority participating in the review. The relevant transmission system operator and the competent regulatory authority should give the neighbouring transmission system operators prior notice of the review and the results of the review should be published. It should be possible to launch a regional bidding zone review following the technical report on congestion in line with Article 14 of this Regulation or in accordance with existing procedures laid down in Regulation (EU) 2015/1222.

(20) When regional coordination centres carry out a capacity calculation, they should maximise capacity considering non-costly remedial actions and respecting the operational security limits of transmission system operators in the Capacity Calculation Region. Where the calculation does not result in capacity equal to or above the minimum capacities set out in this Regulation, regional coordination centres should consider all available costly remedial actions to further increase capacity up to the minimum capacities, including redispatching potential within and between the capacity calculation regions, while respecting the operational security limits of transmission system operators of the Capacity Calculation Regions. Transmission system operators should report accurately and transparently on all aspects of capacity calculation in accordance with this Regulation and should ensure that all information sent to regional coordination centres is accurate and fit for purpose.

(21) When performing capacity calculation, regional coordination centres should calculate cross-zonal capacities using data from transmission system operators which respects the operational security limits of the transmission system operators' respective control areas. Transmission system operators should be able to deviate from coordinated capacity calculation where its implementation would result in a violation of the operational security limits of network elements in their control area. Those deviations should be carefully monitored and transparently reported to prevent abuse and ensure that the volume of interconnection capacity to be made available to market participants is not limited in order to solve congestion inside a bidding zone. Where an action plan is in place, the action plan should take account of deviations and address their cause.

(22) Core market principles should set out that electricity prices are to be determined through demand and supply. Those prices should indicate when electricity is needed, thereby providing market-based incentives for investments into flexibility sources such as flexible generation, interconnection, demand response or energy storage.

(23) While decarbonisation of the electricity sector, with energy from renewable sources becoming a major part of the market, is one of the goals of the Energy Union, it is crucial that the market removes existing barriers to cross-border trade and encourages investments into supporting infrastructure, for example, more flexible generation, interconnection, demand response and energy storage. To support this shift to variable and distributed generation, and to ensure that energy market principles are the basis for the Union's electricity markets of the future, a renewed focus on short-term markets and scarcity pricing is essential.

(24) Short-term markets improve liquidity and competition by enabling more resources to participate fully in the market, especially those resources that are more flexible. Effective scarcity pricing will encourage market participants to react to market signals and to be available when the market most needs them and ensures that they can recover their costs in the wholesale market. It is therefore critical to ensure that administrative and implicit price caps are removed in order to allow for scarcity pricing. When fully embedded in the market structure, short-term markets and scarcity pricing contribute to the removal of other market distortive measures, such as capacity mechanisms, in order to ensure security of supply. At the same time, scarcity pricing without price caps on the wholesale market should not jeopardize the

possibility of offering reliable and stable prices to final customers, in particular household customers, small and medium-sized enterprises (SMEs) and industrial customers.

(25) Without prejudice to Articles 107, 108 and 109 of the Treaty on the Functioning of the European Union (TFEU), derogations from fundamental market principles such as balancing responsibility, market-based dispatch, or redispatch reduce flexibility signals and act as barriers to the development of solutions such as energy storage, demand response or aggregation. While derogations are still necessary to avoid an unnecessary administrative burden to certain market participants, in particular household customers and SMEs, broad derogations covering entire technologies are not consistent with the aim of achieving efficient market-based decarbonisation processes and should thus be replaced by more targeted measures.

(26) A precondition for effective competition in the internal market for electricity is non-discriminatory, transparent and adequate charges for network use including interconnecting lines in the transmission system.

(27) Uncoordinated curtailments of interconnector capacities increasingly limit the exchange of electricity between Member States and have become a serious obstacle to the development of a functioning internal market for electricity. The maximum level of capacity of interconnectors and the critical network elements should therefore be made available, complying with the safety standards of secure network operation including respecting the security standard for contingencies (N-1). However, there are some limitations to setting the capacity level in a meshed grid. Clear minimum levels of available capacity for cross-zonal trade need to be put in place in order to reduce the effects of loop flows and internal congestions on cross-zonal trade and to give a predictable capacity value for market participants. Where the flow-based approach is used, that minimum capacity should determine the minimum share of the capacity of a cross-zonal or an internal critical network element respecting operational security limits to be used as an input for coordinated capacity calculation under Regulation (EU) 2015/1222, taking into account contingencies. The total remaining share of capacity may be used for reliability margins, loop flows and internal flows. Furthermore, in the case of foreseeable problems for ensuring grid security, derogations should be possible for a limited transitional phase. Such derogations should be accompanied by a methodology and projects providing for a long-term solution.

(28) The transmission capacity to which the 70 % minimum capacity criterion shall apply in the net transmission capacity (NTC) approach is the maximum transmission of active power which respects operational security limits and takes into account contingencies. The coordinated calculation of this capacity also takes into account that electricity flows are distributed unevenly between individual components and is not just adding capacities of interconnecting lines. This capacity does not take into account the reliability margin, loop flows or internal flows which are taken into account within the remaining 30 %.

(29) It is important to avoid distortion of competition resulting from the differing safety, operational and planning standards used by transmission system operators in Member States. Moreover, there should be transparency for market participants concerning available transfer capacities and the security, planning and operational standards that affect the available transfer capacities.

(30) To efficiently steer necessary investments, prices also need to provide signals where electricity is most needed. In a zonal electricity system, correct locational signals require a coherent, objective and reliable determination of bidding zones via a transparent process. In order to ensure efficient operation and planning of the Union electricity network and to provide effective price signals for new generation capacity, demand response and transmission infrastructure, bidding zones should reflect structural congestion. In particular, cross-zonal capacity should not be reduced in order to resolve internal congestion.

(31) To reflect the divergent principles of optimising bidding zones without jeopardising liquid markets and grid investments two options should be provided for in order to address congestion. Member States should be able to choose between a reconfiguration of their bidding zone or measures such as grid reinforcement and grid optimisation. The starting point for such a decision should be the identification of long-term structural congestions by the transmission system operator or operators of a Member State, by a report by the European Network of Transmission System Operators for Electricity (the ‘ENTSO for Electricity’) on congestion or by a bidding zone review. Member States should first try to find a common solution on how to best address congestion. In the course of doing so Member States might adopt multinational or national action plans to address congestion. For Member States which adopt an action plan to address congestion, a phase-in period in the form of a linear trajectory for the opening of interconnectors should apply. At the end of the implementation of such an action plan, Member States should have a possibility to choose whether to opt for a reconfiguration of the bidding zone(s) or whether to opt for addressing remaining congestion through remedial actions for which they bear the

costs. In the latter case their bidding zone should not be reconfigured against the will of that Member State, provided that the minimum capacity is reached. The minimum level of capacity that should be used in coordinated capacity calculation should be a percentage of the capacity of a critical network element, as defined following the selection process under Regulation (EU) 2015/1222, after, or, in the case of a flow-based approach, while, respecting the operational security limits in contingency situations. A Commission decision on the configuration of a bidding zone should be possible as a measure of last resort and should only amend the configuration of a bidding zone in those Member States which have opted to split the bidding zone or which have not reached the minimum level of the capacity.

(32) Efficient decarbonisation of the electricity system via market integration requires systematically abolishing barriers to cross-border trade to overcome market fragmentation and to allow Union energy customers to fully benefit from the advantages of integrated electricity markets and competition.

(33) This Regulation should lay down basic principles with regard to tarification and capacity allocation, while providing for the adoption of guidelines detailing further relevant principles and methodologies, in order to allow rapid adaptation to changed circumstances.

(34) The management of congestion problems should provide correct economic signals to transmission system operators and market participants and should be based on market mechanisms.

(35) In an open, competitive market, transmission system operators should be compensated for costs incurred as a result of hosting cross-border flows of electricity on their networks by the operators of the transmission systems from which cross-border flows originate and the systems where those flows end.

(36) Payments and receipts resulting from compensation between transmission system operators should be taken into account when setting national network tariffs.

(37) The actual amount payable for cross-border access to the system can vary considerably, depending on the transmission system operator involved and as a result of differences in the structure of the tarification systems applied in Member States. A certain degree of harmonisation is therefore necessary in order to avoid distortions of trade.

(38) There should be rules on the use of revenues from congestion-management procedures, unless the specific nature of the interconnector concerned justifies an exemption from those rules.

(39) To provide for a level playing field between all market participants, network tariffs should be applied in a way which does not positively or negatively discriminate between production connected at the distribution level and production connected at the transmission level. Network tariffs should not discriminate against energy storage, and should not create disincentives for participation in demand response or represent an obstacle to improving energy efficiency.

(40) In order to increase transparency and comparability in tariff-setting where binding harmonisation is not seen as adequate, a best practices report on tariff methodologies should be issued by the European Agency for the Cooperation of Energy Regulators (‘ACER’) established by Regulation (EU) 2019/942 of the European Parliament and of the Council.

(41) To better ensure optimal investment in the trans-European grid and to better address the challenge where viable interconnection projects cannot be built for lack of prioritisation at national level, the use of congestion rents should be reconsidered and contribute to guarantee availability and maintain or increase interconnection capacities.

(42) In order to ensure optimal management of the electricity transmission network and to allow trading and supplying electricity across borders in the Union, the ENTSO for Electricity, should be established. The tasks of the ENTSO for Electricity should be carried out in accordance with Union's competition rules which remain applicable to the decisions of the ENTSO for Electricity. The tasks of the ENTSO for Electricity should be well-defined and its working method should ensure efficiency and transparency. The network codes prepared by the ENTSO for Electricity are not intended to replace the necessary national network codes for non-cross-border issues. Given that more effective progress may be achieved through an approach at regional level, transmission system operators should set up regional structures within the overall cooperation structure, whilst ensuring that results at regional level are compatible with network codes and non-binding ten-year network development plans at Union level. Member States should promote cooperation and monitor the effectiveness of the network at regional level. Cooperation at regional level should be compatible with progress towards a competitive and efficient internal market for electricity.

(43) The ENTSO for Electricity should carry out a robust medium to long-term European resource adequacy assessment to provide an objective basis for the assessment of adequacy concerns. The resource

adequacy concern that capacity mechanisms address should be based on the European resource adequacy assessment. That assessment may be complemented by national assessments.

(44) The methodology for the long-term resource adequacy assessment (from ten-year-ahead to year-ahead) set out in this Regulation has a different purpose than the seasonal adequacy assessments (six months ahead) as set out in Article 9 of Regulation (EU) 2019/941 of the European Parliament and of the Council. Medium to long-term assessments are mainly used to identify adequacy concerns and to assess the need for capacity mechanisms whereas seasonal adequacy assessments are used to alert to short-term risks that might occur in the following six months that are likely to result in a significant deterioration of the electricity supply situation. In addition, regional coordination centres also carry out regional adequacy assessments on electricity transmission system operation. Those are very short-term adequacy assessments (from week-ahead to day-ahead) used in the context of system operation.

(45) Before introducing capacity mechanisms, Member States should assess the regulatory distortions contributing to the related resource adequacy concern. Member States should be required to adopt measures to eliminate the identified distortions, and should adopt a timeline for their implementation. Capacity mechanisms should only be introduced to address the adequacy problems that cannot be solved through the removal of such distortions.

(46) Member States intending to introduce capacity mechanisms should derive resource adequacy targets on the basis of a transparent and verifiable process. Member States should have the freedom to set their own desired level of security of supply.

(47) Pursuant to Article 108 TFEU, the Commission has exclusive competence to assess the compatibility with the internal market of State aid measures which the Member States may put in place. That assessment is to be carried out on the basis of Article 107(3) TFEU and in accordance with the relevant provisions and guidelines which the Commission may adopt to that effect. This Regulation is without prejudice to the Commission's exclusive competence conferred by TFEU.

(48) Capacity mechanisms that are in place should be reviewed in light of this Regulation.

(49) Detailed rules for facilitating effective cross-border participation in capacity mechanisms should be laid down in this Regulation. Transmission system operators should facilitate the cross-border participation of interested producers in capacity mechanisms in other Member States. Therefore, they should calculate capacities up to which cross-border participation would be possible, should enable participation and should check availabilities. Regulatory authorities should enforce the cross-border rules in the Member States.

(50) Capacity mechanisms should not result in overcompensation, while at the same time they should ensure security of supply. In that regard, capacity mechanisms other than strategic reserves should be constructed to ensure that the price paid for availability automatically tends to zero when the level of capacity which would be profitable on the energy market in the absence of a capacity mechanism is expected to be adequate to meet the level of capacity demanded.

(51) To support Member States and regions facing social, industrial and economic challenges due to the energy transition, the Commission has set up a coal and carbon-intensive regions initiative. In that context, the Commission should assist Member States, including with targeted financial support to enable a ‘just transition’ in those regions, where available.

(52) In view of the differences between national energy systems and the technical limitations of existing electricity networks, the best approach to achieving progress in market integration is often at a regional level. Regional cooperation between transmission system operators should thus be strengthened. In order to ensure efficient cooperation, a new regulatory framework should provide for stronger regional governance and regulatory oversight, including by strengthening ACER's decision-making power with respect to cross-border issues. It is possible that closer cooperation of Member States is also needed in crisis situations, to increase security of supply and to limit market distortions.

(53) Coordination between transmission system operators at regional level has been formalised with the mandatory participation of transmission system operators in regional security coordinators. The regional coordination of transmission system operators should be further developed with an enhanced institutional framework via the establishment of regional coordination centres. The establishment of regional coordination centres should take into account existing or planned regional coordination initiatives and should support the increasingly integrated operation of electricity systems across the Union, thereby ensuring their efficient and secure performance. For that reason, it is necessary to ensure that the coordination of transmission system operators through regional coordination centres takes place across the Union. Where transmission system operators of a given region are not yet coordinated by an existing or a planned regional coordination centre, the transmission system operators in that region

should establish or designate a regional coordination centre.

(54) The geographical scope of regional coordination centres should allow them to contribute effectively to the coordination of the operations of transmission system operators across regions and should lead to enhanced system security and market efficiency. Regional coordination centres should have the flexibility to carry out their tasks in the region in the way which is best adapted to the nature of the individual tasks entrusted to them.

(55) Regional coordination centres should carry out tasks where their regionalisation brings added value compared to tasks performed at national level. The tasks of regional coordination centres should cover the tasks carried out by regional security coordinators pursuant to the Commission Regulation (EU) 2017/1485 as well as additional system operation, market operation and risk preparedness tasks. The tasks carried out by regional coordination centres should not include real-time operation of the electricity system.

(56) In performing their tasks, regional coordination centres should contribute to the achievement of the 2030 and 2050 objectives set out in the climate and energy policy framework.

(57) Regional coordination centres should primarily act in the interest of system and market operation of the region. Hence, regional coordination centres should be entrusted with the powers necessary to coordinate the actions to be taken by transmission system operators of the system operation region for certain functions and with an enhanced advisory role for the remaining functions.

(58) The human, technical, physical and financial resources of regional coordination centres should not exceed what is strictly necessary for the fulfilment of their tasks.

(59) The ENTSO for Electricity should ensure that the activities of regional coordination centres are coordinated across regional boundaries.

(60) In order to increase efficiencies in the electricity distribution networks in the Union and to ensure close cooperation with transmission system operators and the ENTSO for Electricity, an entity of distribution system operators in the Union (EU DSO entity) should be established. The tasks of the EU DSO entity should be well-defined and its working method should ensure efficiency, transparency and representativeness among Union distribution system operators. The EU DSO entity should closely cooperate with the ENTSO for Electricity on the preparation and implementation of the network codes where applicable and should work on providing guidance on the integration inter alia of distributed generation and energy storage in distribution networks or other areas which relate to the management of distribution networks. The EU DSO entity should also take due account of the specificities inherent to distribution systems connected downstream with electricity systems on islands which are not connected with other electricity systems by means of interconnectors.

(61) Increased cooperation and coordination among transmission system operators is required to create network codes for providing and managing effective and transparent access to the transmission networks across borders, and to ensure coordinated and sufficiently forward-looking planning and sound technical evolution of the transmission system in the Union, including the creation of interconnection capacities, with due regard to the environment. Those network codes should be in line with non-binding framework guidelines, which are developed by ACER. ACER should have a role in reviewing, based on matters of fact, draft network codes, including their compliance with those framework guidelines, and it should be enabled to recommend them for adoption by the Commission. ACER should assess proposed amendments to the network codes and it should be enabled to recommend them for adoption by the Commission. Transmission system operators should operate their networks in accordance with those network codes.

(62) Experience with the development and adoption of network codes has shown that it is useful to streamline the development procedure by clarifying that ACER has the right to revise draft electricity network codes before submitting them to the Commission.

(63) To ensure the smooth functioning of the internal market for electricity, provision should be made for procedures which allow the adoption of decisions and guidelines with regard, inter alia, to tarification and capacity allocation by the Commission whilst ensuring the involvement of regulatory authorities in that process, where appropriate through their association at Union level. Regulatory authorities, together with other relevant authorities in the Member States, have an important role to play in contributing to the proper functioning of the internal market for electricity.

(64) All market participants have an interest in the work expected of the ENTSO for Electricity. An effective consultation process is therefore essential and existing structures that are set up to facilitate and streamline the consultation process, such as via regulatory authorities or ACER, should play an important role.

(65) In order to ensure greater transparency regarding the entire electricity transmission network in the Union, the ENTSO for Electricity should draw up, publish and regularly update a non-binding Union-wide ten-year network development plan. Viable electricity transmission networks and necessary regional interconnections, relevant from a commercial or security of supply point of view, should be included in that network development plan.

(66) Investments in major new infrastructure should be promoted strongly while ensuring the proper functioning of the internal market for electricity. In order to enhance the positive effect of exempted direct current interconnectors on competition and security of supply, market interest during the project-planning phase should be tested and congestion-management rules should be adopted. Where direct current interconnectors are located in the territory of more than one Member State, ACER should handle as a last resort the exemption request in order to take better account of its cross-border implications and to facilitate its administrative handling. Moreover, given the exceptional risk profile of constructing those exempt major infrastructure projects, undertakings with supply and production interests should be able to benefit from a temporary derogation from the full unbundling rules for the projects concerned. Exemptions granted under Regulation (EC) No 1228/2003 of the European Parliament and of the Council continue to apply until the scheduled expiry date as decided in the granted exemption decision. Offshore electricity infrastructure with dual functionality (so-called ‘offshore hybrid assets’) combining transport of offshore wind energy to shore and interconnectors, should also be eligible for exemption such as under the rules applicable to new direct current interconnectors. Where necessary, the regulatory framework should duly consider the specific situation of those assets to overcome barriers to the realisation of societally cost-efficient offshore hybrid assets.

(67) To enhance trust in the market, its participants need to be sure that those engaging in abusive behaviour can be subject to effective, proportionate and dissuasive penalties. The competent authorities should be given the competence to investigate effectively allegations of market abuse. To that end, it is necessary that competent authorities have access to data that provides information on operational decisions made by suppliers. In the electricity market, many relevant decisions are made by the producers, which should keep information in relation to those decisions available to and easily accessible by the competent authorities for a set period. The competent authorities should, furthermore, regularly monitor whether the transmission system operators comply with the rules. Small producers with no real ability to distort the market should be exempt from that obligation.

(68) The Member States and the competent authorities should be required to provide relevant information to the Commission. Such information should be treated confidentially by the Commission. Where necessary, the Commission should have an opportunity to request relevant information directly from undertakings concerned, provided that the competent authorities are informed.

(69) Member States should lay down rules on penalties applicable to infringements of the provisions of this Regulation and ensure that they are implemented. Those penalties should be effective, proportionate and dissuasive.

(70) Member States, the Energy Community Contracting Parties and other third countries which apply this Regulation or are part of the synchronous area of Continental Europe should closely cooperate on all matters concerning the development of an integrated electricity trading region and should take no measures that endanger the further integration of electricity markets or security of supply of Member States and Contracting Parties.

(71) At the time of the adoption of Regulation (EC) No 714/2009, only few rules for the internal market for electricity existed at Union level. Since then, the Union internal market has become more complex due to the fundamental change the markets are undergoing in particular regarding deployment of variable renewable electricity production. The network codes and guidelines have therefore become extensive and comprehensive and encompass both technical and general issues.

(72) In order to ensure the minimum degree of harmonisation required for effective market functioning, the power to adopt acts in accordance with Article 290 of TFEU should be delegated to the Commission in respect of non-essential elements of certain specific areas which are fundamental for market integration. Those acts should include the adoption and amendment of certain network codes and guidelines where they supplement this Regulation, the regional cooperation of transmission system operators and regulatory authorities, financial compensations between transmission system operators, as well as the application of exemption provisions for new interconnectors. It is of particular importance that the Commission carry out appropriate consultations during its preparatory work, including at expert level, and that those consultations be conducted in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making. In particular, to ensure equal participation in the preparation of delegated acts, the European Parliament and the Council receive all documents at the same time as Member States' experts, and their experts systematically have access to

meetings of Commission expert groups dealing with the preparation of delegated acts.

(73) In order to ensure uniform conditions for the implementation of this Regulation, implementing powers in accordance with Article 291 of TFEU should be conferred on the Commission. Those powers should be exercised in accordance with Regulation (EU) No 182/2011 of the European Parliament and of the Council. The examination procedure should be used for the adoption of those implementing acts.

(74) Since the objective of this Regulation, namely the provision of a harmonised framework for cross-border exchanges of electricity, cannot be sufficiently achieved by the Member States but can rather, by reason of its scale and effects, 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 in order to achieve that objective.

(75) For reasons of coherence and legal certainty, no provision in this Regulation should prevent the application of the derogations emerging from Article 66 of Directive (EU) 2019/944,

HAVE ADOPTED THIS REGULATION:

CHAPTER I

SUBJECT MATTER, SCOPE AND DEFINITIONS

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 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, empower consumers, ensure competitiveness on the global market as well as demand response, energy storage and 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;

(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.

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;

(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;

(26) ‘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;

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

(28) ‘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;

(29) ‘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;

(30) ‘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;

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

(32) ‘specific balancing product’ means a balancing product different from a standard balancing product;

(33) ‘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;

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

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

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

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

(38) ‘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;

(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.

CHAPTER II

GENERAL RULES FOR THE ELECTRICITY MARKET

Article 3

Principles regarding the operation of electricity markets

Member States, regulatory authorities, transmission system operators, distribution system operators, market operators and delegated operators shall ensure that electricity markets are operated in accordance with the following principles:

(a) prices shall be formed on the basis of demand and supply;

(b) market rules shall encourage free price formation and shall avoid actions which prevent price formation on the basis of demand and supply;

(c) market rules shall facilitate the development of more flexible generation, sustainable low carbon generation, and more flexible demand;

(d) customers shall be enabled to benefit from market opportunities and increased competition on retail markets and shall be empowered to act as market participants in the energy market and the energy transition;

(e) market participation of final customers and small enterprises shall be enabled by aggregation of generation from multiple power-generating facilities or load from multiple demand response facilities to provide joint offers on the electricity market and be jointly operated in the electricity system, in accordance with Union competition law;

(f) market rules shall enable the decarbonisation of the electricity system and thus the economy, including by enabling the integration of electricity from renewable energy sources and by providing incentives for energy efficiency;

(g) market rules shall deliver appropriate investment incentives for generation, in particular for long-term investments in a decarbonised and sustainable electricity system, energy storage, energy efficiency and demand response to meet market needs, and shall facilitate fair competition thus ensuring security of supply;

(h) barriers to cross-border electricity flows between bidding zones or Member States and cross-border transactions on electricity markets and related services markets shall be progressively removed;

(i) market rules shall provide for regional cooperation where effective;

(j) safe and sustainable generation, energy storage and demand response shall participate on equal footing in the market, under the requirements provided for in the Union law;

(k) all producers shall be directly or indirectly responsible for selling the electricity they generate;

(l) market rules shall allow for the development of demonstration projects into sustainable, secure and low-carbon energy sources, technologies or systems which are to be realised and used to the benefit of society;

(m) market rules shall enable the efficient dispatch of generation assets, energy storage and demand response;

(n) market rules shall allow for entry and exit of electricity generation, energy storage and electricity supply undertakings based on those undertakings' assessment of the economic and financial viability of their operations;

(o) in order to allow market participants to be protected against price volatility risks on a market basis, and mitigate uncertainty on future returns on investment, long-term hedging products shall be tradable on exchanges in a transparent manner and long-term electricity supply contracts shall be negotiable over the counter, subject to compliance with Union competition law;

(p) market rules shall facilitate trade of products across the Union and. regulatory changes shall take into account effects on both short-term and long-term forward and futures markets and products;

(q) market participants shall have a right to obtain access to the transmission networks and distribution networks on objective, transparent and non-discriminatory terms.

Article 4

Just transition

The Commission shall support Member States that put in place a national strategy for the progressive reduction of existing coal and other solid fossil fuel generation and mining capacity through all available means to enable a just transition in regions affected by structural change. The Commission shall assist Member States in addressing the social and economic impacts of the clean energy transition.

The Commission shall work in close partnership with the stakeholders in coal and carbon-intensive regions, shall facilitate the access to and use of available funds and programmes, and shall encourage the exchange of good practices, including discussions on industrial roadmaps and reskilling needs.

Article 5

Balance responsibility

1.All market participants shall be responsible for the imbalances they cause in the system (‘balance responsibility’). To that end, market participants shall either be balance responsible parties or shall contractually delegate their responsibility to a balance responsible party of their choice. Each balance responsible party shall be financially responsible for its imbalances and shall strive to be balanced or shall help the electricity system to be balanced.

2.Member States may provide derogations from balance responsibility only for:

(a) demonstration projects for innovative technologies, subject to approval by the regulatory authority, provided that those derogations are limited to the time and extent necessary for achieving the demonstration purposes;

(b) power-generating facilities using renewable energy sources with an installed electricity capacity of less than 400 kW;

(c) installations benefitting from support approved by the Commission before IP completion day under Union State aid rules pursuant to Articles 107, 108 and 109 TFEU as those Articles had effect in EU law immediately before IP completion day , and commissioned before 4 July 2019.

Member States may provide incentives to market participants which are fully or partly exempted from balancing responsibility to accept full balancing responsibility.

3.When a Member State provides a derogation in accordance with paragraph 2, it shall ensure that the financial responsibility for imbalances is fulfilled by another market participant.

4.For power-generating facilities commissioned from 1 January 2026, point (b) of paragraph 2 shall apply only to generating installations using renewable energy sources with an installed electricity capacity of less than 200 kW.

Article 6

Balancing market

1.Balancing markets, including prequalification processes, shall be organised in such a way as to:

(a) ensure effective non-discrimination between market participants taking account of the different technical needs of the electricity system and the different technical capabilities of generation sources, energy storage and demand response;

(b) ensure that services are defined in a transparent and technologically neutral manner and are procured in a transparent, market-based manner;

(c) ensure non-discriminatory access to all market participants, individually or through aggregation, including for electricity generated from variable renewable energy sources, demand response and

energy storage;

(d) respect the need to accommodate the increasing share of variable generation, increased demand responsiveness and the advent of new technologies.

2.The price of balancing energy shall not be pre-determined in contracts for balancing capacity. Procurement processes shall be transparent in accordance with Article 40(4) of Directive (EU) 2019/944, while protecting the confidentiality of commercially sensitive information.

3.Balancing markets shall ensure operational security whilst allowing for maximum use and efficient allocation of cross-zonal capacity across timeframes in accordance with Article 17.

4.The settlement of balancing energy for standard balancing products and specific balancing products shall be based on marginal pricing (pay-as-cleared) unless all regulatory authorities approve an alternative pricing method on the basis of a joint proposal by all transmission system operators following an analysis demonstrating that that alternative pricing method is more efficient.

Market participants shall be allowed to bid as close to real time as possible, and balancing energy gate closure times shall not be before the intraday cross-zonal gate closure time.

Transmission system operators applying a central dispatching model may establish additional rules in accordance with the guideline on electricity balancing adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009.

5.The imbalances shall be settled at a price that reflects the real-time value of energy.

6.Each imbalance price area shall be equal to a bidding zone, except in the case of a central dispatching model where an imbalance price area may constitute a part of a bidding zone.

7.The dimensioning of reserve capacity shall be performed by the transmission system operators and shall be facilitated at regional level.

8.The procurement of balancing capacity shall be performed by the transmission system operator and may be facilitated at a regional level. Reservation of cross-border capacity to that end may be limited. The procurement of balancing capacity shall be market-based and organised in such a way as to be non-discriminatory between market participants in the prequalification process in accordance with Article 40(4) of Directive (EU) 2019/944 whether market participants participate individually or through aggregation.

Procurement of balancing capacity shall be based on a primary market unless and to the extent that the regulatory authority has provided for a derogation to allow the use of other forms of market-based procurement on the grounds of a lack of competition in the market for balancing services. Derogations from the obligation to base the procurement of balancing capacity on use of primary markets shall be reviewed every three years.

9.The procurement of upward balancing capacity and downward balancing capacity shall be carried out separately, unless the regulatory authority approves a derogation from this principle on the basis that this would result in higher economic efficiency as demonstrated by an evaluation performed by the transmission system operator. Contracts for balancing capacity shall not be concluded more than one day before the provision of the balancing capacity and the contracting period shall be no longer than one day, unless and to the extent that the regulatory authority has approved the earlier contracting or longer contracting periods to ensure the security of supply or to improve economic efficiency.

Where a derogation is granted, for at least 40 % of the standard balancing products and a minimum of 30 % of all products used for balancing capacity, contracts for the balancing capacity shall be concluded for no more than one day before the provision of the balancing capacity and the contracting period shall be no longer than one day. The contracting of the remaining part of the balancing capacity shall be performed for a maximum of one month in advance of the provision of balancing capacity and shall have a maximum contractual period of one month.

10.At the request of the transmission system operator, the regulatory authority may decide to extend the contractual period of the remaining part of balancing capacity referred to in paragraph 9 to a maximum

period of twelve months provided that such a decision is limited in time, and the positive effects in terms of lowering of costs for final customers exceed the negative impacts on the market. The request shall include:

(a) the specific period during which the exemption would apply;

(b) the specific volume of balancing capacity to which the exemption would apply;

(c) an analysis of the impact of the exemption on the participation of balancing resources; and

(d) a justification for the exemption demonstrating that such an exemption would lead to lower costs to final customers.

11.Notwithstanding paragraph 10, from 1 January 2026 contract periods shall not be longer than six months.

12.By 1 January 2028, regulatory authorities shall report to the Commission and ACER on the share of the total capacity covered by contracts with a duration or a procurement period of longer than one day.

13.Transmission system operators or their delegated operators shall publish, as close to real time as possible but with a delay after delivery of no more than 30 minutes, the current system balance of their scheduling areas, the estimated imbalance prices and the estimated balancing energy prices.

14.Transmission system operators may, where standard balancing products are not sufficient to ensure operational security or where some balancing resources cannot participate in the balancing market through standard balancing products, propose, and the regulatory authorities may approve, derogations from paragraphs 2 and 4 for specific balancing products which are activated locally without exchanging them with other transmission system operators.

Proposals for derogations shall include a description of measures proposed to minimise the use of specific products, subject to economic efficiency, a demonstration that the specific products do not create significant inefficiencies and distortions in the balancing market either inside or outside the scheduling area, as well as, where applicable, the rules and information for the process for converting the balancing energy bids from specific balancing products into balancing energy bids from standard balancing products.

Article 7

Day-ahead and intraday markets

1.Transmission system operators and NEMOs 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.

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 trade in as close as possible to real time across 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 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 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.

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 kW or less, to allow for the effective participation of demand-side response, energy storage and small-scale renewables including direct participation by customers.

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.In accordance with Regulation (EU) 2016/1719, 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, unless an assessment of the forward market on the bidding zone borders performed by the competent regulatory authorities shows that there are sufficient hedging opportunities in the concerned bidding zones.

2.Long-term transmission rights shall be allocated in a transparent, market based and non-discriminatory manner through a single allocation platform.

3.Subject to compliance with Union competition law, 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 be limited to trades within a Member State or bidding zone.

Article 10

Technical bidding limits

1.There shall be neither a maximum nor a minimum limit to the wholesale electricity price. This provision shall apply, inter alia, to bidding and clearing in all timeframes and shall include balancing energy and imbalance prices, without prejudice to the technical price limits which may be applied in the balancing timeframe and in the day-ahead and intraday timeframes in accordance with paragraph 2.

2.NEMOs may apply harmonised limits on maximum and minimum clearing prices for day-ahead and intraday timeframes. Those limits shall be sufficiently high so as not to unnecessarily restrict trade, shall be harmonised for the internal market and shall take into account the maximum value of lost load. NEMOs shall implement a transparent mechanism to adjust automatically the technical bidding limits in due time in the event that the set limits are expected to be reached. The adjusted higher limits shall remain applicable until further increases under that mechanism are required.

3.Transmission system operators shall not take any measures for the purpose of changing wholesale prices.

4.Regulatory authorities or, where a Member State has designated another competent authority for that purpose, such designated competent authorities, shall identify policies and measures applied within their territory that could contribute to indirectly restricting wholesale price formation, including limiting bids relating to the activation of balancing energy, capacity mechanisms, measures by the transmission system operators, measures intended to challenge market outcomes, or to prevent the abuse of dominant positions or inefficiently defined bidding zones.

5.Where a regulatory authority or designated competent authority has identified a policy or measure which could serve to restrict wholesale price formation it shall take all appropriate actions to eliminate or, if not possible, to mitigate the impact of that policy or measure on bidding behaviour. Member States shall provide a report to the Commission by 5 January 2020 detailing the measures and actions they have taken or intend to take.

Article 11

Value of lost load

1.By 5 July 2020 where required for the purpose of setting a reliability standard in accordance with Article 25 regulatory authorities or, where a Member State has designated another competent authority for that purpose, such designated competent authorities shall determine a single estimate of the value of lost load for their territory. That estimate shall be made publically available. Regulatory authorities or other designated competent authorities may determine different estimates per bidding zone if they have more than one bidding zone in their territory. Where a bidding zone consists of territories of more than one Member State, the concerned regulatory authorities or other designated competent authorities shall determine a single estimate of the value of lost load for that bidding zone. In determining the single estimate of the value of lost load, regulatory authorities or other designated competent authorities shall apply the methodology referred to in Article 23(6).

2.Regulatory authorities and designated competent authorities shall update their estimate of the value of lost load at least every five years, or earlier where they observe a significant change.

Article 12

Dispatching of generation and demand response

1.The dispatching of power-generating facilities and demand response shall be non-discriminatory, transparent and, unless otherwise provided under paragraphs 2 to 6, market based.

2.Member States shall ensure that when dispatching electricity generating installations, system operators shall give priority to generating installations using renewable energy sources to the extent permitted by the secure operation of the national electricity system, based on transparent and non-discriminatory criteria and where such power-generating facilities are either:

(a) power-generating facilities that use renewable energy sources and have an installed electricity capacity of less than 400 kW; or

(b) demonstration projects for innovative technologies, subject to approval by the regulatory authority, provided that such priority is limited to the time and extent necessary for achieving the demonstration purposes.

3.A Member State may decide not to apply priority dispatch to power-generating facilities as referred to in point (a) of paragraph 2 with a start of operation at least six months after that decision, or to apply a lower minimum capacity than that set out under point (a) of paragraph 2, provided that:

(a) it has well-functioning intraday and other wholesale and balancing markets and that those markets are fully accessible to all market participants in accordance with this Regulation;

(b) redispatching rules and congestion management are transparent to all market participants;

(c) the national contribution of the Member State towards the Union's binding overall target for share of energy from renewable sources under Article 3(2) of Directive (EU) 2018/2001 of the European Parliament and of the Council(3) and point (a)(2) of Article 4 of Regulation (EU) 2018/1999 of the European Parliament and of the Council(4) is at least equal to the corresponding result of the formula set out in Annex II to Regulation (EU) 2018/1999 and the Member State's share of energy from renewable sources is not below its reference points under point (a)(2) of Article 4 of Regulation (EU) 2018/1999, or alternatively, the Member State's share of energy from renewable sources in gross final electricity consumption is at least 50 %;

(d) the Member State has notified the planned derogation to the Commission setting out in detail how the conditions set out under points (a), (b) and (c) are fulfilled; and

(e) the Member State has published the planned derogation, including the detailed reasoning for the granting of that derogation, taking due account of the protection of commercially sensitive information where required.

Any derogation shall avoid retroactive changes that affect generating installations already benefiting from priority dispatch, notwithstanding any agreement between a Member State and the operator of a generating installation on a voluntary basis.

Member States may provide incentives to installations eligible for priority dispatch to voluntarily give up priority dispatch.

4.Member States may provide for priority dispatch for electricity generated in power-generating facilities using high-efficiency cogeneration with an installed electricity capacity of less than 400 kW.

5.For power-generating facilities commissioned as from 1 January 2026, point (a) of paragraph 2 shall apply only to power-generating facilities that use renewable energy sources and have an installed electricity capacity of less than 200 kW.

6.Without prejudice to contracts concluded before 4 July 2019, power-generating facilities that use renewable energy sources or high-efficiency cogeneration and were commissioned before 4 July 2019 and, when commissioned, were subject to priority dispatch under Article 15(5) of Directive 2012/27/EU or Article 16(2) of Directive 2009/28/EC of the European Parliament and of the Council(5) shall continue to benefit from priority dispatch. Priority dispatch shall no longer apply to such power-generating facilities from the date on which the power-generating facility becomes subject to significant modifications, which shall be deemed to be the case at least where a new connection agreement is required or where the generation capacity of the power-generating facility is increased.

7.Priority dispatch shall not endanger the secure operation of the electricity system, shall not be used as a justification for curtailment of cross-zonal capacities beyond what is provided for in Article 16 and shall be based on transparent and non-discriminatory criteria.

Article 13

Redispatching

1.The redispatching of generation and redispatching of demand response shall be based on objective, transparent and non-discriminatory criteria. It shall be open to all generation technologies, all energy storage and all demand response, including those located in other Member States unless technically not feasible.

2.The resources that are redispatched shall be selected from among generating facilities, energy storage or demand response using market-based mechanisms and shall be financially compensated. Balancing energy bids used for redispatching shall not set the balancing energy price.

3.Non-market-based redispatching of generation, energy storage and demand response may only be used where:

(a) no market-based alternative is available;

(b) all available market-based resources have been used;

(c) the number of available power generating, energy storage or demand response facilities is too low to ensure effective competition in the area where suitable facilities for the provision of the service are located; or

(d) the current grid situation leads to congestion in such a regular and predictable way that market-based redispatching would lead to regular strategic bidding which would increase the level of internal congestion and the Member State concerned either has adopted an action plan to address this congestion or ensures that minimum available capacity for cross-zonal trade is in accordance with Article 16(8).

4.The transmission system operators and distribution system operators shall report at least annually to the competent regulatory authority, on:

(a) the level of development and effectiveness of market-based redispatching mechanisms for power generating, energy storage and demand response facilities;

(b) the reasons, volumes in MWh and type of generation source subject to redispatching;

(c) the measures taken to reduce the need for the downward redispatching of generating installations using renewable energy sources or high-efficiency cogeneration in the future including investments in digitalisation of the grid infrastructure and in services that increase flexibility.

The regulatory authority shall submit the report to ACER and shall publish a summary of the data referred to in points (a), (b) and (c) of the first subparagraph together with recommendations for improvement where necessary.

5.Subject to requirements relating to the maintenance of the reliability and safety of the grid, based on transparent and non-discriminatory criteria established by the regulatory authorities, transmission system operators and distribution system operators shall:

(a) guarantee the capability of transmission networks and distribution networks to transmit electricity produced from renewable energy sources or high-efficiency cogeneration with minimum possible redispatching, which shall not prevent network planning from taking into account limited redispatching where the transmission system operator or distribution system operator is able to demonstrate in a transparent way that doing so is more economically efficient and does not exceed 5 % of the annual generated electricity in installations which use renewable energy sources and which are directly connected to their respective grid, unless otherwise provided by a Member State in which electricity from power-generating facilities using renewable energy sources or high-efficiency cogeneration represents more than 50 % of the annual gross final consumption of electricity;

(b) take appropriate grid-related and market-related operational measures in order to minimise the downward redispatching of electricity produced from renewable energy sources or from high-efficiency cogeneration;

(c) ensure that their networks are sufficiently flexible so that they are able to manage them.

6.Where non-market-based downward redispatching is used, the following principles shall apply:

(a) power-generating facilities using renewable energy sources shall only be subject to downward redispatching if no other alternative exists or if other solutions would result in significantly

disproportionate costs or severe risks to network security;

(b) electricity generated in a high-efficiency cogeneration process shall only be subject to downward redispatching if, other than downward redispatching of power-generating facilities using renewable energy sources, no other alternative exists or if other solutions would result in disproportionate costs or severe risks to network security;

(c) self-generated electricity from generating installations using renewable energy sources or high-efficiency cogeneration which is not fed into the transmission or distribution network shall not be subject to downward redispatching unless no other solution would resolve network security issues;

(d) downward redispatching under points (a), (b) and (c)shall be duly and transparently justified. The justification shall be included in the report under paragraph 3.

7.Where non-market based redispatching is used, it shall be subject to financial compensation by the system operator requesting the redispatching to the operator of the redispatched generation, energy storage or demand response facility except in the case of producers that have accepted a connection agreement under which there is no guarantee of firm delivery of energy. Such financial compensation shall be at least equal to the higher of the following elements or a combination of both if applying only the higher would lead to an unjustifiably low or an unjustifiably high compensation:

(a) additional operating cost caused by the redispatching, such as additional fuel costs in the case of upward redispatching, or backup heat provision in the case of downward redispatching of power-generating facilities using high-efficiency cogeneration;

(b) net revenues from the sale of electricity on the day-ahead market that the power-generating, energy storage or demand response facility would have generated without the redispatching request; where financial support is granted to power-generating, energy storage or demand response facilities based on the electricity volume generated or consumed, financial support that would have been received without the redispatching request shall be deemed to be part of the net revenues.

CHAPTER III

NETWORK ACCESS AND CONGESTION MANAGEMENT

SECTION 1

Capacity Allocation

Article 14

Bidding zone review

1.Member States shall take all appropriate measures to address congestions. Bidding zone borders shall be based on long-term, structural congestions in the transmission network. Bidding zones shall not contain such structural congestions unless they have no impact on neighbouring bidding zones, or, as a temporary exemption, their impact on neighbouring bidding zones is mitigated through the use of remedial actions and those structural congestions do not lead to reductions of cross-zonal trading capacity in accordance with the requirements of Article 16. The configuration of bidding zones in the Union shall be designed in such a way as to maximise economic efficiency and to maximise cross-zonal trading opportunities in accordance with Article 16, while maintaining security of supply.

2.Every three years, the ENTSO for Electricity shall report on structural congestions and other major physical congestions between and within bidding zones, including the location and frequency of such congestions, in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009. That report shall contain an assessment of whether the cross-zonal trade capacity reached the linear trajectory pursuant to Article 15 or the minimum capacity pursuant to Article 16 of this Regulation.

3.In order to ensure an optimal configuration of bidding zones, a bidding zone review shall be carried out. That review shall identify all structural congestions and shall include an analysis of different configurations

of bidding zones in a coordinated manner with the involvement of affected stakeholders from all relevant Member States, in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009. Current bidding zones shall be assessed on the basis of their ability to create a reliable market environment, including for flexible generation and load capacity, which is crucial to avoiding grid bottlenecks, balancing electricity demand and supply, securing the long-term security of investments in network infrastructure.

4.For the purposes of this Article and of Article 15 of this Regulation, relevant Member States, transmission system operators or regulatory authorities are those Member States, transmission system operators or regulatory authorities participating in the review of the bidding zone configuration and also to those in the same capacity calculation region pursuant to the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

5.By 5 October 2019 all relevant transmission system operators shall submit a proposal for the methodology and assumptions that are to be used in the bidding zone review process and for the alternative bidding zone configurations to be considered to the relevant regulatory authorities for approval. The relevant regulatory authorities shall take a unanimous decision on the proposal within 3 months of submission of the proposal. Where the regulatory authorities are unable to reach a unanimous decision on the proposal within that time frame, ACER shall, within an additional three months, decide on the methodology and assumptions and the alternative bidding zone configurations to be considered. The methodology shall be based on structural congestions which are not expected to be overcome within the following three years, taking due account of tangible progress on infrastructure development projects that are expected to be realised within the following three years.

6.On the basis of the methodology and assumptions approved pursuant to paragraph 5, the transmission system operators participating in the bidding zone review shall submit a joint proposal to the relevant Member States or their designated competent authorities to amend or maintain the bidding zone configuration no later than 12 months after approval of the methodology and assumptions pursuant to paragraph 5. Other Member States, Energy Community Contracting Parties or other third countries sharing the same synchronous area with any relevant Member State may submit comments.

7.Where structural congestion has been identified in the report pursuant to paragraph 2 of this Article or in the bidding zone review pursuant to this Article or by one or more transmission system operators in their control areas in a report approved by the competent regulatory authority, the Member State with identified structural congestion shall, in cooperation with its transmission system operators, decide, within six months of receipt of the report, either to establish national or multinational action plans pursuant to Article 15, or to review and amend its bidding zone configuration. Those decisions shall be immediately notified to the Commission and to ACER.

8.For those Member States that have opted to amend the bidding zone configuration pursuant to paragraph 7, the relevant Member States shall reach a unanimous decision within six months of the notification referred to in paragraph 7. Other Member States may submit comments to the relevant Member States, who should take account of those comments when reaching their decision. The decision shall be reasoned and shall be notified to the Commission and ACER. In the event that the relevant Member States fail to reach a unanimous decision within those six months, they shall immediately notify the Commission thereof. As a measure of last resort, the Commission after consulting ACER shall adopt a decision whether to amend or maintain the bidding zone configuration in and between those Member States by six months after receipt of such a notification.

9.Member States and the Commission shall consult relevant stakeholders before adopting a decision under this Article.

10.Any decision adopted under this Article shall specify the date of implementation of any changes. That implementation date shall balance the need for expeditiousness with practical considerations, including forward trade of electricity. The decision may establish appropriate transitional arrangements.

11.Where further bidding zone reviews are launched under the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009, this Article shall apply.

Article 15

Action plans

1.Following the adoption of a decision pursuant to Article 14(7), the Member State with identified structural congestion shall develop an action plan in cooperation with its regulatory authority. That action plan shall contain a concrete timetable for adopting measures to reduce the structural congestions identified within four years of the adoption of the decision pursuant to Article 14(7).

2.Irrespective of the concrete progress of the action plan, Member States shall ensure that without prejudice to derogations granted under Article 16(9) or deviations under Article 16(3), the cross-zonal trade capacity is increased on an annual basis until the minimum capacity provided for in Article 16(8) is reached. That minimum capacity shall be reached by 31 December 2025.

Those annual increases shall be achieved by means of a linear trajectory. The starting point of that trajectory shall be either the capacity allocated at the border or on a critical network element in the year before adoption of the action plan or the average during the three years before adoption of the action plan, whichever is higher. Member States shall ensure that, during the implementation of their action plans the capacity made available for cross-zonal trade to be compliant with Article 16(8) is at least equal to the values of the linear trajectory, including by use of remedial actions in the capacity calculation region.

3.The cost of the remedial actions necessary to achieve the linear trajectory referred to in paragraph 2 or make available cross-zonal capacity at the borders or on critical network elements concerned by the action plan shall be borne by the Member State or Member States implementing the action plan.

4.On an annual basis, during the implementation of the action plan and within six months of its expiry, the relevant transmission system operators shall assess for the previous 12 months whether the available cross-border capacity has reached the linear trajectory or, from 1 January 2026, the minimum capacities provided for in Article 16(8) have been achieved. They shall submit their assessments to ACER and to the relevant regulatory authorities. Before drafting the report, each transmission system operator shall submit its contribution to the report, including all the relevant data, to its regulatory authority for approval.

5.For those Member States for which the assessments referred to in paragraph 4 demonstrate that a transmission system operator has not complied with the linear trajectory, the relevant Member States shall, within six months of receipt of the assessment report referred to in paragraph 4, decide unanimously whether to amend or maintain the bidding zone configuration within and between those Member States. In their decision, the relevant Member States should take account of any comments submitted by other Member States. The relevant Member States' decision shall be substantiated and shall be notified to the Commission and to ACER.

The relevant Member States shall notify the Commission immediately if they fail to reach a unanimous decision within the timeframe laid down. Within six months of receipt of such notification, the Commission, as a last resort and after consulting ACER and the relevant stakeholders shall adopt a decision whether to amend or maintain the bidding zone configuration in and between those Member States.

6.Six months before the expiry of the action plan, the Member State with identified structural congestion shall decide whether to address remaining congestion by amending its bidding zone or whether to address remaining internal congestion with remedial actions for which it shall cover the costs.

7.Where no action plan is established within six months of identification of structural congestion pursuant to Article 14(7), the relevant transmission system operators shall, within 12 months of identification of such structural congestion, assess whether the available cross-border capacity has reached the minimum capacities provided for in Article 16(8) during the previous 12 months and shall submit an assessment report to the relevant regulatory authorities and to ACER.

Before drafting the report, each transmission system operator shall send its contribution to the report, including all relevant data, to its national regulatory authority for approval. Where the assessment demonstrates that a transmission system operator has not complied with the minimum capacity, the decision-making process laid down in paragraph 5 of this Article shall apply.

Article 16

General principles of capacity allocation and congestion management

1.Network congestion problems shall be addressed with non-discriminatory market-based solutions which give efficient economic signals to the market participants and transmission system operators involved. Network congestion problems shall be solved by means of non-transaction-based methods, namely methods that do not involve a selection between the contracts of individual market participants. When taking operational measures to ensure that its transmission system remains in the normal state, the transmission system operator shall take into account the effect of those measures on neighbouring control areas and coordinate such measures with other affected transmission system operators as provided for in Regulation (EU) 2015/1222.

2.Transaction curtailment procedures shall be used only in emergency situations, namely where the transmission system operator must act in an expeditious manner and redispatching or countertrading is not possible. Any such procedure shall be applied in a non-discriminatory manner. Except in cases of force majeure, market participants that have been allocated capacity shall be compensated for any such curtailment.

3.Regional coordination centres shall carry out coordinated capacity calculation in accordance with paragraphs 4 and 8 of this Article, as provided for in point (a) of Article 37(1) and in Article 42(1).

Regional coordination centres shall calculate cross-zonal capacities respecting operational security limits using data from transmission system operators including data on the technical availability of remedial actions, not including load shedding. Where regional coordination centres conclude that those available remedial actions in the capacity calculation region or between capacity calculation regions are not sufficient to reach the linear trajectory pursuant to Article 15(2) or the minimum capacities provided for in paragraph 8 of this Article while respecting operational security limits, they may, as a measure of last resort, set out coordinated actions reducing the cross-zonal capacities accordingly. Transmission system operators may deviate from coordinated actions in respect of coordinated capacity calculation and coordinated security analysis only in accordance with Article 42(2).

By 3 months after the entry into operation of the regional coordination centres pursuant to Article 35(2) of this Regulation and every three months thereafter, the regional coordination centres shall submit a report to the relevant regulatory authorities and to ACER on any reduction of capacity or deviation from coordinated actions pursuant to the second subparagraph and shall assess the incidences and make recommendations, if necessary, on how to avoid such deviations in the future. If ACER concludes that the prerequisites for a deviation pursuant to this paragraph are not fulfilled or are of a structural nature, ACER shall submit an opinion to the relevant regulatory authorities and to the Commission. The competent regulatory authorities shall take appropriate action against transmission system operators or regional coordination centres pursuant to Article 59 or 62 of Directive (EU) 2019/944 if the prerequisites for a deviation pursuant to this paragraph were not fulfilled.

Deviations of a structural nature shall be addressed in an action plan referred to in Article 14(7) or in an update of an existing action plan.

4.The maximum level of capacity of the interconnections and the transmission networks affected by cross-border capacity shall be made available to market participants complying with the safety standards of secure network operation. Counter-trading and redispatch, including cross-border redispatch, shall be used to maximise available capacities to reach the minimum capacity provided for in paragraph 8. A coordinated and non-discriminatory process for cross-border remedial actions shall be applied to enable such maximisation, following the implementation of a redispatching and counter-trading cost-sharing methodology.

5.Capacity shall be allocated by means of explicit capacity auctions or implicit auctions including both capacity and energy. Both methods may coexist on the same interconnection. For intraday trade, continuous trading, which may be complemented by auctions, shall be used.

6.In the case of congestion, the valid highest value bids for network capacity, whether implicit or explicit, offering the highest value for the scarce transmission capacity in a given timeframe, shall be successful.

Other than in the case of new interconnectors which benefit from an exemption under Article 7 of Regulation (EC) No 1228/2003, Article 17 of Regulation (EC) No 714/2009 or Article 63 of this Regulation, establishing reserve prices in capacity-allocation methods shall be prohibited.

7.Capacity shall be freely tradable on a secondary basis, provided that the transmission system operator is informed sufficiently in advance. Where a transmission system operator refuses any secondary trade (transaction), this shall be clearly and transparently communicated and explained to all the market participants by that transmission system operator and notified to the regulatory authority.

8.Transmission system operators shall not limit the volume of interconnection capacity to be made available to market participants as a means of solving congestion inside their own bidding zone or as a means of managing flows resulting from transactions internal to bidding zones. Without prejudice to the application of the derogations under paragraphs 3 and 9 of this Article and to the application of Article 15(2), this paragraph shall be considered to be complied with where the following minimum levels of available capacity for cross-zonal trade are reached:

(a) for borders using a coordinated net transmission capacity approach, the minimum capacity shall be 70 % of the transmission capacity respecting operational security limits after deduction of contingencies, as determined in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(b) for borders using a flow-based approach, the minimum capacity shall be a margin set in the capacity calculation process as available for flows induced by cross-zonal exchange. The margin shall be 70 % of the capacity respecting operational security limits of internal and cross-zonal critical network elements, taking into account contingencies, as determined in accordance with the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

The total amount of 30 % can be used for the reliability margins, loop flows and internal flows on each critical network element.

9.At the request of the transmission system operators in a capacity calculation region, the relevant regulatory authorities may grant a derogation from paragraph 8 on foreseeable grounds where necessary for maintaining operational security. Such derogations, which shall not relate to the curtailment of capacities already allocated pursuant to paragraph 2, shall be granted for no more than one-year at a time, or, provided that the extent of the derogation decreases significantly after the first year, up to a maximum of two years. The extent of such derogations shall be strictly limited to what is necessary to maintain operational security and they shall avoid discrimination between internal and cross-zonal exchanges.

Before granting a derogation, the relevant regulatory authority shall consult the regulatory authorities of other Member States forming part of the affected capacity calculation regions. Where a regulatory authority disagrees with the proposed derogation, ACER shall decide whether it should be granted pursuant to point (a) of Article 6(10) of Regulation (EU) 2019/942. The justification and reasons for the derogation shall be published.

Where a derogation is granted, the relevant transmission system operators shall develop and publish a methodology and projects that shall provide a long-term solution to the issue that the derogation seeks to address. The derogation shall expire when the time limit for the derogation is reached or when the solution is applied, whichever is earlier.

10.Market participants shall inform the transmission system operators concerned within a reasonable period in advance of the relevant operational period whether they intend to use allocated capacity. Any allocated capacity that is not going to be used shall be made available again to the market, in an open, transparent and non-discriminatory manner.

11.As far as technically possible, transmission system operators shall net the capacity requirements of any power flows in opposite directions over the congested interconnection line in order to use that line to its maximum capacity. Having full regard to network security, transactions that relieve the congestion shall not be refused.

12.The financial consequences of a failure to honour obligations associated with the allocation of capacity shall be attributed to the transmission system operators or NEMOs who are responsible for such a failure. Where market participants fail to use the capacity that they have committed to use, or, in the case of explicitly auctioned capacity, fail to trade capacity on a secondary basis or give the capacity back in due time, those market participants shall lose the rights to such capacity and shall pay a cost-reflective charge. Any cost-reflective charges for the failure to use capacity shall be justified and proportionate. If a transmission system operator does not fulfil its obligation of providing firm transmission capacity, it shall be liable to compensate the market participant for the loss of capacity rights. Consequential losses shall not be taken into account for that purpose. The key concepts and methods for the determination of liabilities that accrue upon failure to honour obligations shall be set out in advance in respect of the financial consequences, and shall be subject to review by the relevant regulatory authority.

13.When allocating costs of remedial actions between transmission system operators, regulatory authorities shall analyse to what extent flows resulting from transactions internal to bidding zones contribute to the congestion between two bidding zones observed, and allocate the costs based on the contribution to the congestion to the transmission system operators of the bidding zones creating such flows except for costs induced by flows resulting from transactions internal to bidding zones that are below the level that could be expected without structural congestion in a bidding zone.

That level shall be jointly analysed and defined by all transmission system operators in a capacity calculation region for each individual bidding zone border, and shall be subject to the approval of all regulatory authorities in the capacity calculation region.

Article 17

Allocation of cross-zonal capacity across timeframes

1.Transmission system operators shall recalculate available cross-zonal capacity at least after day-ahead gate closure times and after intraday cross-zonal gate closure times. Transmission system operators shall allocate the available cross-zonal capacity plus any remaining cross-zonal capacity not previously allocated and any cross-zonal capacity released by physical transmission right holders from previous allocations in the following cross-zonal capacity allocation process.

2.Transmission system operators shall propose an appropriate structure for the allocation of cross-zonal capacity across timeframes, including day-ahead, intraday and balancing. That allocation structure shall be subject to review by the relevant regulatory authorities. In drawing up their proposal, the transmission system operators shall take into account:

(a) the characteristics of the markets;

(b) the operational conditions of the electricity system, such as the implications of netting firmly declared schedules;

(c) the level of harmonisation of the percentages allocated to different timeframes and the timeframes adopted for the different cross-zonal capacity allocation mechanisms that are already in place.

3.Where cross-zonal capacity is available after the intraday cross-zonal gate closure time, transmission system operators shall use the cross-zonal capacity for the exchange of balancing energy or for the operation of the imbalance netting process.

4.Where cross-zonal capacity is allocated for the exchange of balancing capacity or sharing of reserves pursuant to Article 6(8) of this Regulation, transmission system operators shall use the methodologies developed in the guideline on electricity balancing adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009.

5.Transmission system operators shall not increase the reliability margin calculated pursuant to Regulation (EU) 2015/1222 due to the exchange of balancing capacity or sharing of reserves.

SECTION 2

Network charges and congestion income

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 and shall provide appropriate incentives to transmission system operators and distribution system operators over both the short and long run, in order to increase efficiencies, including energy efficiency, to foster market integration and security of supply, to support efficient investments, to support related research activities, and to facilitate innovation in interest of consumers in areas such as digitalisation, flexibility services and interconnection.

3.Where appropriate, the level of the tariffs applied to producers or final customers, or both shall provide locational signals 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 differentiated 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.Distribution tariff methodologies shall provide incentives to 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, shall include those costs in distribution tariffs, and may introduce performance targets in order to provide incentives to distribution system operators to increase efficiencies in their networks, including through energy efficiency, flexibility

and the development of smart grids and intelligent metering systems.

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;

(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.

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) maintaining or 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.

3.Where the priority objectives set out in paragraph 2 have been adequately fulfilled, the revenues may be used as income to be taken into account by the regulatory authorities when approving the methodology for calculating network tariffs or fixing network tariffs, or both. The residual revenues shall be placed on a separate internal account line until such a time as it can be spent for the purposes set out in paragraph 2.

4.The use of revenues in accordance with point (a) or (b) of paragraph 2 shall be subject to a methodology proposed by the transmission system operators after consulting regulatory authorities and relevant stakeholders and after approval by ACER. The transmission system operators shall submit the proposed methodology to ACER by 5 July 2020 and ACER shall decide on the proposed methodology within six months of receiving it.

ACER may request transmission system operators to amend or update the methodology referred to in the first subparagraph. ACER shall decide on the amended or updated methodology not later than six months after its

submission.

The methodology shall set out at least the conditions under which the revenues can be used for the purposes referred to in paragraph 2, the conditions under which those revenues may be placed on a separate internal account line for future use for those purposes, and for how long those revenues may be placed on such an account line.

5.Transmission system operators shall clearly establish, in advance, how any congestion income will be used, and shall report to the regulatory authorities on the actual use of that income. By 1 March each year, the regulatory authorities shall inform ACER and shall publish a report setting out:

(a) the amount of revenue collected for the 12-month period ending on 31 December of the previous year;

(b) how that revenue was used pursuant to paragraph 2, including the specific projects the income has been used for, and the amount placed on a separate account line;

(c) the amount that was used when calculating network tariffs; and

(d) verification that the amount referred to in point (c) complies with this Regulation and the methodology developed pursuant to paragraphs 3 and 4.

Where some of the congestion revenues are used when calculating network tariffs, the report shall set out how the transmission system operators fulfilled the priority objectives set out in paragraph 2 where applicable.

CHAPTER IV

RESOURCE ADEQUACY

Article 20

Resource adequacy in the internal market for electricity

1.Member States shall monitor resource adequacy within their territory on the basis of the European resource adequacy assessment referred to in Article 23. For the purpose of complementing the European resource adequacy assessment, Member States may also carry out national resource adequacy assessments pursuant to Article 24.

2.Where the European resource adequacy assessment referred to in Article 23 or national resource adequacy assessment referred to in Article 24 identifies a resource adequacy concern, the Member State concerned shall identify any regulatory distortions or market failures that caused or contributed to the emergence of the concern.

3.Member States with identified resource adequacy concerns shall develop and publish an implementation plan with a timeline for adopting measures to eliminate any identified regulatory distortions or market failures. When addressing resource adequacy concerns, the Member States shall in particular take into account the principles set out in Article 3 and shall consider:

(a) removing regulatory distortions;

(b) removing price caps in accordance with Article 10;

(c) introducing a shortage pricing function for balancing energy as referred to in Article 44(3) of Regulation (EU) 2017/2195;

(d) increasing interconnection and internal grid capacity with a view to reaching at least their interconnection targets as referred in point (d)(1) of Article 4 of Regulation (EU) 2018/1999;

(e) enabling self-generation, energy storage, demand side measures and energy efficiency by adopting measures to eliminate any identified regulatory distortions;

(f) ensuring cost-efficient and market-based procurement of balancing and ancillary services;

(g) removing regulated prices where required by Article 5 of Directive (EU) 2019/944.

4.The Member States concerned shall submit their implementation plans to the Commission for review.

5.Within four months of receipt of the implementation plan, the Commission shall issue an opinion on whether the measures are sufficient to eliminate the regulatory distortions or market failures that were identified pursuant to paragraph 2, and may invite the Member States to amend their implementation plans accordingly.

6.The Member States concerned shall monitor the application of their implementation plans and shall publish the results of the monitoring in an annual report and shall submit that report to the Commission.

7.The Commission shall issue an opinion on whether the implementation plans have been sufficiently implemented and whether the resource adequacy concern has been resolved.

8.Member States shall continue to adhere to the implementation plan after the identified resource adequacy concern has been resolved.

Article 21

General principles for capacity mechanisms

1.To eliminate residual resource adequacy concerns, Member States may, as a last resort while implementing the measures referred to in Article 20(3) of this Regulation, 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 22

Design principles for capacity mechanisms

1.Any capacity mechanism shall:

(a) be temporary;

(b) not create undue market distortions and not limit cross-zonal trade;

(c) not go beyond what is necessary to address the adequacy concerns referred to in Article 20;

(d) select capacity providers by means of a transparent, non-discriminatory and competitive process;

(e) provide incentives for capacity providers to be available in times of expected system stress;

(f) ensure that the remuneration is determined through the competitive process;

(g) set out the technical conditions for the participation of capacity providers in advance of the selection process;

(h) be open to participation of all resources that are capable of providing the required technical performance, including energy storage and demand side management;

(i) apply appropriate penalties to capacity providers that are not available in times of system stress.

2.The design of strategic reserves shall meet the following requirements:

(a) where a capacity mechanism has been designed as a strategic reserve, the resources thereof are to be dispatched only if the transmission system operators are likely to exhaust their balancing resources to establish an equilibrium between demand and supply;

(b) during imbalance settlement periods where resources in the strategic reserve are dispatched, imbalances in the market are to be settled at least at the value of lost load or at a higher value than the intraday technical price limit as referred in Article 10(1), whichever is higher;

(c) the output of the strategic reserve following dispatch is to be attributed to balance responsible parties through the imbalance settlement mechanism;

(d) the resources taking part in the strategic reserve are not to receive remuneration from the wholesale electricity markets or from the balancing markets;

(e) the resources in the strategic reserve are to be held outside the market for at least the duration of the contractual period.

The requirement referred to in point (a) of the first subparagraph shall be without prejudice to the activation of resources before actual dispatch in order to respect the ramping constraints and operating requirements of the resources. The output of the strategic reserve during activation shall not be attributed to balance groups through wholesale markets and shall not change their imbalances.

3.In addition to the requirements laid down in paragraph 1, capacity mechanisms other than strategic reserves shall:

(a) be constructed so as to ensure that the price paid for availability automatically tends to zero when the level of capacity supplied is expected to be adequate to meet the level of capacity demanded;

(b) remunerate the participating resources only for their availability and ensure that the remuneration does not affect decisions of the capacity provider on whether or not to generate;

(c) ensure that capacity obligations are transferable between eligible capacity providers.

4.Capacity mechanisms shall incorporate the following requirements regarding CO_2 emission limits:

(a) from 4 July 2019 at the latest, generation capacity that started commercial production on or after that date and that emits more than 550 g of CO_2 of fossil fuel origin per kWh of electricity shall not be committed or to receive payments or commitments for future payments under a capacity mechanism;

(b) from 1 July 2025 at the latest, generation capacity that started commercial production before 4 July 2019 and that emits more than 550 g of CO_2 of fossil fuel origin per kWh of electricity and more than 350 kg CO_2 of fossil fuel origin on average per year per installed kWe shall not be committed or receive payments or commitments for future payments under a capacity mechanism.

The emission limit of 550 g CO_2 of fossil fuel origin per kWh of electricity and the limit of 350 kg CO_2 of fossil fuel origin on average per year per installed kWe referred to in points (a) and (b) of the first subparagraph shall be calculated on the basis of the design efficiency of the generation unit meaning the net efficiency at nominal capacity under the relevant standards provided for by the International Organization for Standardization.

By 5 January 2020, ACER shall publish an opinion providing technical guidance related to the calculation of the values referred in the first subparagraph.

5.Member States that apply capacity mechanisms on 4 July 2019 shall adapt their mechanisms to comply with Chapter 4 without prejudice to commitments or contracts concluded by 31 December 2019.

Article 23

European resource adequacy assessment

1.The European resource adequacy assessment shall identify resource adequacy concerns by assessing the overall adequacy of the electricity system to supply current and projected demands for electricity at Union level, at the level of the Member States, and at the level of individual bidding zones, where relevant. The European resource adequacy assessment shall cover each year within a period of 10 years from the date of that assessment.

2.The European resource adequacy assessment shall be conducted by the ENTSO for Electricity.

3.By 5 January 2020, the ENTSO for Electricity shall submit to the Electricity Coordination Group set up under Article 1 of Commission Decision of 15 November 2012(6) and ACER a draft methodology for the European resource adequacy assessment based on the principles provided for in paragraph 5 of this Article.

4.Transmission system operators shall provide the ENTSO for Electricity with the data it needs to carry out the European resource adequacy assessment.

The ENTSO for Electricity shall carry out the European resource adequacy assessment on an annual basis. Producers and other market participants shall provide transmission system operators with data regarding expected utilisation of the generation resources, taking into account the availability of primary resources and appropriate scenarios of projected demand and supply.

5.The European resource adequacy assessment shall be based on a transparent methodology which shall ensure that the assessment:

(a) is carried out on each bidding zone level covering at least all Member States;

(b) is based on appropriate central reference scenarios of projected demand and supply including an economic assessment of the likelihood of retirement, mothballing, new-build of generation assets and measures to reach energy efficiency and electricity interconnection targets and appropriate sensitivities on extreme weather events, hydrological conditions, wholesale prices and carbon price developments;

(c) contains separate scenarios reflecting the differing likelihoods of the occurrence of resource adequacy concerns which the different types of capacity mechanisms are designed to address;

(d) appropriately takes account of the contribution of all resources including existing and future possibilities for generation, energy storage, sectoral integration, demand response, and import and export and their contribution to flexible system operation;

(e) anticipates the likely impact of the measures referred in Article 20(3);

(f) includes variants without existing or planned capacity mechanisms and, where applicable, variants with such mechanisms;

(g) is based on a market model using the flow-based approach, where applicable;

(h) applies probabilistic calculations;

(i) applies a single modelling tool;

(j) includes at least the following indicators referred to in Article 25:

- (j)‘expected energy not served’, and

- ‘loss of load expectation’;

(k) identifies the sources of possible resource adequacy concerns, in particular whether it is a network constraint, a resource constraint, or both;

(l) takes into account real network development;

(m) ensures that the national characteristics of generation, demand flexibility and energy storage, the availability of primary resources and the level of interconnection are properly taken into consideration.

6.By 5 January 2020, the ENTSO for Electricity shall submit to ACER a draft methodology for calculating:

(a) the value of lost load;

(b) the cost of new entry for generation, or demand response; and

(c) the reliability standard referred to in Article 25.

The methodology shall be based on transparent, objective and verifiable criteria.

7.The proposals under paragraphs 3 and 6 for the draft methodology, the scenarios, sensitivities and assumptions on which they are based, and the results of the European resource adequacy assessment under paragraph 4 shall be subject to the prior consultation of Member States, the Electricity Coordination Group and relevant stakeholders and approval by ACER under the procedure set out in Article 27.

Article 24

National resource adequacy assessments

1.National resource adequacy assessments shall have a regional scope and shall be based on the methodology referred in Article 23(3) in particular in points (b) to (m) of Article 23(5).

National resource adequacy assessments shall contain the reference central scenarios as referred to in point (b) of Article 23(5).

National resource adequacy assessments may take into account additional sensitivities to those referred in point (b) of Article 23(5). In such cases, national resource adequacy assessments may:

(a) make assumptions taking into account the particularities of national electricity demand and supply;

(b) use tools and consistent recent data that are complementary to those used by the ENTSO for Electricity for the European resource adequacy assessment.

In addition, the national resource adequacy assessments, in assessing the contribution of capacity providers located in another Member State to the security of supply of the bidding zones that they cover, shall use the methodology as provided for in point (a) of Article 26(11).

2.National resource adequacy assessments and, where applicable, the European resource adequacy assessment and the opinion of ACER pursuant to paragraph 3 shall be made publicly available.

3.Where the national resource adequacy assessment identifies an adequacy concern with regard to a bidding zone that was not identified in the European resource adequacy assessment, the national resource adequacy assessment shall include the reasons for the divergence between the two resource adequacy assessments, including details of the sensitivities used and the underlying assumptions. Member States shall publish that assessment and submit it to ACER.

Within two months of the date of the receipt of the report, ACER shall provide an opinion on whether the differences between the national resource adequacy assessment and the European resource adequacy assessment are justified.

The body that is responsible for the national resource adequacy assessment shall take due account of ACER's opinion, and where necessary shall amend its assessment. Where it decides not to take ACER's opinion fully into account, the body that is responsible for the national resource adequacy assessment shall publish a report with detailed reasons.

Article 25

Reliability standard

1.When applying capacity mechanisms Member States shall have a reliability standard in place. A reliability standard shall indicate the necessary level of security of supply of the Member State in a transparent manner. In the case of cross-border bidding zones, such reliability standards shall be established jointly by the relevant authorities.

2.The reliability standard shall be set by the Member State or by a competent authority designated by the Member State, following a proposal by the regulatory authority. The reliability standard shall be based on the methodology set out in Article 23(6).

3.The reliability standard shall be calculated using at least the value of lost load and the cost of new entry over a given timeframe and shall be expressed as ‘expected energy not served’ and ‘loss of load expectation’.

4.When applying capacity mechanisms, the parameters determining the amount of capacity procured in the capacity mechanism shall be approved by the Member State or by a competent authority designated by the Member State, on the basis of a proposal of the regulatory authority.

Article 26

Cross-border participation in capacity mechanisms

1.Capacity mechanisms other than strategic reserves and where technically feasible, strategic reserves shall be open to direct cross-border participation of capacity providers located in another Member State, subject to the conditions laid down in this Article.

2.Member States shall ensure that foreign capacity capable of providing equivalent technical performance to domestic capacities has the opportunity to participate in the same competitive process as domestic capacity. In the case of capacity mechanisms in operation on 4 July 2019, Member States may allow interconnectors to participate directly in the same competitive process as foreign capacity for a maximum of four years from 4 July 2019 or two years after the date of approval of the methodologies referred to in paragraph 11, whichever is earlier.

Member States may require foreign capacity to be located in a Member State that has a direct network connection with the Member State applying the mechanism.

3.Member States shall not prevent capacity which is located in their territory from participating in capacity mechanisms of other Member States.

4.Cross-border participation in capacity mechanisms shall not change, alter or otherwise affect cross-zonal schedules or physical flows between Member States. Those schedules and flows shall be determined solely by the outcome of capacity allocation pursuant to Article 16.

5.Capacity providers shall be able to participate in more than one capacity mechanism.

Where capacity providers participate in more than one capacity mechanism for the same delivery period, they shall participate up to the expected availability of interconnection and the likely concurrence of system stress between the system where the mechanism is applied and the system in which the foreign capacity is located, in accordance with the methodology referred to in point (a) of paragraph 11.

6.Capacity providers shall be required to make non-availability payments where their capacity is not available.

Where capacity providers participate in more than one capacity mechanism for the same delivery period, they shall be required to make multiple non-availability payments where they are unable to fulfil multiple commitments.

7.For the purposes of providing a recommendation to transmission system operators, regional coordination centres established pursuant to Article 35 shall calculate on an annual basis the maximum entry capacity available for the participation of foreign capacity. That calculation shall take into account the expected availability of interconnection and the likely concurrence of system stress in the system where the mechanism is applied and the system in which the foreign capacity is located. Such a calculation shall be required for each bidding zone border.

Transmission system operators shall set the maximum entry capacity available for the participation of foreign capacity based on the recommendation of the regional coordination centre on an annual basis.

8.Member States shall ensure that the entry capacity referred to in paragraph 7 is allocated to eligible capacity providers in a transparent, non-discriminatory and market-based manner.

9.Where capacity mechanisms allow for cross-border participation in two neighbouring Member States, any revenues arising through the allocation referred to in paragraph 8 shall accrue to the transmission system operators concerned and shall be shared between them in accordance with the methodology referred in point (b) of paragraph 11 of this Article or in accordance with a common methodology approved by both relevant regulatory authorities. If the neighbouring Member State does not apply a capacity mechanism or applies a capacity mechanism which is not open to cross-border participation, the share of revenues shall be approved by the competent national authority of the Member State in which the capacity mechanism is implemented after having sought the opinion of the regulatory authorities of the neighbouring Member States. Transmission system operators shall use such revenues for the purposes set out in Article 19(2).

10.The transmission system operator where the foreign capacity is located shall:

(a) establish whether interested capacity providers can provide the technical performance as required by the capacity mechanism in which the capacity provider intends to participate, and register that capacity provider as an eligible capacity provider in a registry set up for that purpose;

(b) carry out availability checks;

(c) notify the transmission system operator in the Member State applying the capacity mechanism of the information it acquires under points (a) and (b) of this subparagraph and the second subparagraph.

The relevant capacity provider shall notify the transmission system operator of its participation in a foreign capacity mechanism without delay.

11.By 5 July 2020 the ENTSO for Electricity shall submit to ACER:

(a) a methodology for calculating the maximum entry capacity for cross-border participation as referred to in paragraph 7;

(b) a methodology for sharing the revenues referred to in paragraph 9;

(c) common rules for the carrying out of availability checks referred to in point (b) of paragraph 10;

(d) common rules for determining when a non-availability payment is due;

(e) terms of the operation of the registry as referred to in point (a) of paragraph 10;

(f) common rules for identifying capacity eligible to participate in the capacity mechanism as referred to in point (a) of paragraph 10.

The proposal shall be subject to prior consultation and approval by ACER in accordance with Article 27.

12.The regulatory authorities concerned shall verify whether the capacities have been calculated in accordance with the methodology referred to in point (a) of paragraph 11.

13.Regulatory authorities shall ensure that cross-border participation in capacity mechanisms is organised in an effective and non-discriminatory manner. They shall in particular provide for adequate administrative arrangements for the enforcement of non-availability payments across borders.

14.The capacities allocated in accordance with paragraph 8 shall be transferable between eligible capacity providers. Eligible capacity providers shall notify the registry as referred to in point (a) of paragraph 10 of any such transfer.

15.By 5 July 2021 the ENTSO for Electricity shall set up and operate the registry referred to in point (a) of paragraph 10. The registry shall be open to all eligible capacity providers, the systems implementing capacity mechanisms and their transmission system operators.

Article 27

Approval procedure

1.Where reference is made to this Article, the procedure set out in paragraphs 2, 3 and 4 shall apply to the approval of proposals submitted by the ENTSO for Electricity.

2.Before submitting a proposal, the ENTSO for Electricity shall carry out a consultation involving all relevant stakeholders, including regulatory authorities and other national authorities. It shall duly take the results of that consultation into consideration in its proposal.

3.Within three months of the date of receipt of the proposal referred to in paragraph 1, ACER shall either approve or amend it. In the latter case, ACER shall consult the ENTSO for Electricity before approving the amended proposal. ACER shall publish the approved proposal on its website within three months of the date of receipt of the proposed documents.

4.ACER may request changes to the approved proposal at any time. Within six months of the date of receipt of such a request, the ENTSO for Electricity shall submit a draft of the proposed changes to ACER. Within three months of the date of receipt of the draft, ACER shall amend or approve the changes and publish those changes on its website.

CHAPTER V

TRANSMISSION SYSTEM OPERATION

Article 28

European network of transmission system operators for electricity

1.Transmission system operators shall cooperate at Union level through the ENTSO for Electricity, in order to promote the completion and functioning of the internal market for electricity and cross-zonal trade and to ensure the optimal management, coordinated operation and sound technical evolution of the European electricity transmission network.

2.In performing its functions under Union law, the ENTSO for Electricity shall act with a view to establishing a well-functioning and integrated internal market for electricity and shall contribute to the efficient and sustainable achievement of the objectives set out in the policy framework for climate and energy covering the period from 2020 to 2030, in particular by contributing to the efficient integration of electricity generated from renewable energy sources and to increases in energy efficiency while maintaining system security. The ENTSO for Electricity shall be equipped with adequate human and financial resources to carry out its duties.

Article 29

The ENTSO for Electricity

1.The transmission system operators for electricity shall submit to the Commission and to ACER any draft amendments to the statutes, list of members or rules of procedure of the ENTSO for Electricity.

2.Within two months of receipt of the draft amendments to the statutes, list of members or rules of procedure, ACER, after consulting the organisations representing all stakeholders, in particular the system users, including customers, shall provide an opinion to the Commission on these draft amendments to the statutes, list of members or rules of procedure.

3.The Commission shall deliver an opinion on the draft amendments to the statutes, list of members or rules of procedures taking into account ACER's opinion as provided for in paragraph 2 and within three months of receipt of ACER's opinion.

4.Within three months of receipt of the Commission's favourable opinion, the transmission system operators shall adopt and publish the amended statutes or rules of procedure.

5.The documents referred to in paragraph 1 shall be submitted to the Commission and to ACER where there are changes thereto or upon the reasoned request of either of them. The Commission and ACER shall deliver an opinion in accordance with paragraphs 2, 3 and 4.

Article 30

Tasks of the ENTSO for Electricity

1.The ENTSO for Electricity shall:

(a) develop network codes in the areas set out in Article 59(1) and (2) with a view to achieving the objectives set out in Article 28;

(b) adopt and publish a non-binding Union-wide ten-year network development plan, (‘Union-wide network development plan’), biennially;

(c) prepare and adopt proposals related to the European resource adequacy assessment pursuant to Article 23 and proposals for the technical specifications for cross-border participation in capacity mechanisms pursuant to Article 26(11);

(d) adopt recommendations relating to the coordination of technical cooperation between Union and third-country transmission system operators;

(e) adopt a framework for the cooperation and coordination between regional coordination centres;

(f) adopt a proposal defining the system operation region in accordance with Article 36;

(g) cooperate with distribution system operators and the EU DSO entity;

(h) promote the digitalisation of transmission networks including deployment of smart grids, efficient real time data acquisition and intelligent metering systems;

(i) adopt common network operation tools to ensure coordination of network operation in normal and emergency conditions, including a common incident classification scale, and research plans, including the deployment of those plans through an efficient research programme. Those tools shall specify inter alia:

  (i) the information, including appropriate day-ahead, intraday and real-time information, useful for improving operational coordination, as well as the optimal frequency for the collection and sharing of such information;

  (ii) the technological platform for the exchange of information in real time and where appropriate, the technological platforms for the collection, processing and transmission of the other information referred to in point (i), as well as for the implementation of the procedures capable of increasing operational coordination between transmission system operators with a view to such coordination becoming Union-wide;

  (iii) how transmission system operators make available the operational information to other transmission system operators or any entity duly mandated to support them to achieve operational coordination, and to ACER; and

  (iv) that transmission system operators designate a contact point in charge of answering inquiries from other transmission system operators or from any entity duly mandated as referred to in point (iii), or from ACER concerning such information;

(j) adopt an annual work programme;

(k) contribute to the establishment of interoperability requirements and non-discriminatory and transparent procedures for accessing data as provided for in Article 24 of Directive (EU) 2019/944;

(l) adopt an annual report;

(m) carry out and adopt seasonal adequacy assessments pursuant to Article 9(2) of Regulation (EU) 2019/941;

(n) promote cyber security and data protection in cooperation with relevant authorities and regulated entities;

(o) take into account the development of demand response in fulfilling its tasks.

2.The ENTSO for Electricity shall report to ACER on shortcomings identified regarding the establishment and performance of regional coordination centres.

3.The ENTSO for Electricity shall publish the minutes of its assembly meetings, board meetings and committee meetings and provide the public with regular information on its decision-making and activities.

4.The annual work programme referred to in point (j) of paragraph 1 shall contain a list and description of the network codes to be prepared, a plan on coordination of operation of the network, and research and development activities, to be realised in that year, and an indicative calendar.

5.The ENTSO for Electricity shall provide ACER with the information that ACER requires to fulfil its tasks pursuant to Article 32(1). In order to enable the ENTSO for Electricity to meet that requirement, transmission system operators shall provide the ENTSO for Electricity with the requisite information.

6.Upon request of the Commission, the ENTSO for Electricity shall give its views to the Commission on the adoption of the guidelines as laid down in Article 61.

Article 31

Consultations

1.While preparing the proposals pursuant to the tasks referred to in Article 30(1), the ENTSO for Electricity shall conduct an extensive consultation process. The consultation process shall be structured in a way to

enable the accommodation of stakeholder comments before the final adoption of the proposal and in an open and transparent manner, involving all relevant stakeholders, and, in particular, the organisations representing such stakeholders, in accordance with the rules of procedure referred to in Article 29. That consultation shall also involve regulatory authorities and other national authorities, supply and generation undertakings, system users including customers, distribution system operators, including relevant industry associations, technical bodies and stakeholder platforms. It shall aim at identifying the views and proposals of all relevant parties during the decision-making process.

2.All documents and minutes of meetings related to the consultations referred to in paragraph 1 shall be made public.

3.Before adopting the proposals referred to in Article 30(1) the ENTSO for Electricity shall indicate how the observations received during the consultation have been taken into consideration. It shall provide reasons where observations have not been taken into account.

Article 32

Monitoring by ACER

1.ACER shall monitor the execution of the tasks of the ENTSO for Electricity referred to in Article 30(1), (2) and (3) and report its findings to the Commission.

ACER shall monitor the implementation by the ENTSO for Electricity of network codes developed under Article 59. Where the ENTSO for Electricity has failed to implement such network codes, ACER shall request the ENTSO for Electricity to provide a duly reasoned explanation as to why it has failed to do so. ACER shall inform the Commission of that explanation and provide its opinion thereon.

ACER shall monitor and analyse the implementation of the network codes and the guidelines adopted by the Commission as laid down in Article 58(1), and their effect on the harmonisation of applicable rules aimed at facilitating market integration as well as on non-discrimination, effective competition and the efficient functioning of the market, and report to the Commission.

2.The ENTSO for Electricity shall submit the draft Union-wide network development plan, the draft annual work programme, including the information regarding the consultation process, and the other documents referred to in Article 30(1) to ACER for its opinion.

Where it considers that the draft annual work programme or the draft Union-wide network development plan submitted by the ENTSO for Electricity does not contribute to non-discrimination, effective competition, the efficient functioning of the market or a sufficient level of cross-border interconnection open to third-party access, ACER shall provide a duly reasoned opinion as well as recommendations to the ENTSO for Electricity and to the Commission within two months of the submission.

Article 33

Costs

The costs related to the activities of the ENTSO for Electricity referred to in Articles 28 to 32 and 58 to 61 of this Regulation, and in Article 11 of Regulation (EU) No 347/2013 of the European Parliament and of the Council(7) shall be borne by the transmission system operators and shall be taken into account in the calculation of tariffs. Regulatory authorities shall approve those costs only if they are reasonable and appropriate.

Article 34

Regional cooperation of transmission system operators

1.Transmission system operators shall establish regional cooperation within the ENTSO for Electricity to contribute to the activities referred to in Article 30(1), (2) and (3). In particular, they shall publish a regional investment plan biennially, and may take investment decisions based on that regional investment plan. The ENTSO for Electricity shall promote cooperation between transmission system operators at regional level ensuring interoperability, communication and monitoring of regional performance in those areas which have not yet been harmonised at Union level.

2.Transmission system operators shall promote operational arrangements in order to ensure the optimum management of the network and shall promote the development of energy exchanges, the coordinated allocation of cross-border capacity through non-discriminatory market-based solutions, paying due attention to the specific merits of implicit auctions for short-term allocations, and the integration of balancing and reserve power mechanisms.

3.For the purposes of achieving the goals set in paragraphs 1 and 2, the geographical area covered by each regional cooperation structure may be established by the Commission, taking into account existing regional cooperation structures. Each Member State may promote cooperation in more than one geographical area.

The Commission is empowered to adopt delegated acts in accordance with Article 68, supplementing this Regulation, establishing the geographical area covered by each regional cooperation structure. For that purpose, the Commission shall consult the regulatory authorities, ACER and the ENTSO for Electricity.

The delegated acts referred to in this paragraph shall be without prejudice to Article 36.

Article 35

Establishment and mission of regional coordination centres

1.By 5 July 2020, all transmission system operators of a system operation region shall submit a proposal for the establishment of regional coordination centres to the regulatory authorities concerned in accordance with the criteria set out in this Chapter.

The regulatory authorities of the system operation region shall review and approve the proposal.

The proposal shall at least include the following elements:

(a) the Member State of the prospective seat of the regional coordination centres and the participating transmission system operators;

(b) the organisational, financial and operational arrangements necessary to ensure the efficient, secure and reliable operation of the interconnected transmission system;

(c) an implementation plan for the entry into operation of the regional coordination centres;

(d) the statutes and rules of procedure of the regional coordination centres;

(e) a description of cooperative processes in accordance with Article 38;

(f) a description of the arrangements concerning the liability of the regional coordination centres in accordance with Article 47;

(g) where two regional coordination centres are maintained on a rotational basis in accordance with Article 36(2), a description of the arrangements to provide clear responsibilities to those regional coordination centres and procedures on the execution of their tasks.

2.Following approval by regulatory authorities of the proposal in paragraph 1, the regional coordination centres shall replace the regional security coordinators established pursuant to the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009 and shall enter into operation by 1 July 2022.

3.Regional coordination centres shall have a legal form referred to in Annex II to Directive (EU) 2017/1132 of the European Parliament and of the Council(8).

4.In performing their tasks under Union law, regional coordination centres shall act independently of individual national interests and independently of the interests of transmission system operators.

5.Regional coordination centres shall complement the role of transmission system operators by performing the tasks of regional relevance assigned to them in accordance with Article 37. Transmission system operators shall be responsible for managing electricity flows and ensuring a secure, reliable and efficient electricity system in accordance with point (d) of Article 40(1) of Directive (EU) 2019/944.

Article 36

Geographical scope of regional coordination centres

1.By 5 January 2020 the ENTSO for Electricity shall submit to ACER a proposal specifying which transmission system operators, bidding zones, bidding zone borders, capacity calculation regions and outage coordination regions are covered by each of the system operation regions. The proposal shall take into account the grid topology, including the degree of interconnection and of interdependency of the electricity system in terms of flows and the size of the region which shall cover at least one capacity calculation region.

2.The transmission system operators of a system operation region shall participate in the regional coordination centre established in that region. In exceptional circumstances, where the control area of a transmission system operator is part of various synchronous areas, the transmission system operator may participate in two regional coordination centres. For the bidding zone borders adjacent to system operation regions, the proposal in paragraph 1 shall specify how the coordination between regional coordination centres for those borders is to take place. For the Continental Europe synchronous area, where the activities of two regional coordination centres may overlap in a system operation region, the transmission system operators of that system operation region shall decide to either designate a single regional coordination centre in that region or that the two regional coordination centres carry out some or all of the tasks of regional relevance in the entire system operation region on a rotational basis while other tasks are carried out by a single designated regional coordination centre.

3.Within three months of receipt of the proposal in paragraph 1, ACER shall either approve the proposal defining the system operation regions or propose amendments. 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.

4.The relevant transmission system operators may submit a proposal to ACER for the amendment of system operation regions defined pursuant to paragraph 1. The process set out in paragraph 3 shall apply.

Article 37

Tasks of regional coordination centres

1.Each regional coordination centre shall carry out at least all the following tasks of regional relevance in the entire system operation region where it is established:

(a) carrying out the coordinated capacity calculation in accordance with the methodologies developed pursuant to the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(b) carrying out the coordinated security analysis in accordance with the methodologies developed pursuant to the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(c) creating common grid models in accordance with the methodologies and procedures developed pursuant to the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(d) supporting the consistency assessment of transmission system operators' defence plans and restoration plans in accordance with the procedure set out in the emergency and restoration network code adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009;

(e) carrying out regional week ahead to at least day-ahead system adequacy forecasts and preparation of risk reducing actions in accordance with the methodology set out in Article 8 of Regulation (EU) 2019/941 and the procedures set out in the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(f) carrying out regional outage planning coordination in accordance with the procedures and methodologies set out in the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009;

(g) training and certification of staff working for regional coordination centres;

(h) supporting the coordination and optimisation of regional restoration as requested by transmission system operators;

(i) carrying out post-operation and post-disturbances analysis and reporting;

(j) regional sizing of reserve capacity;

(k) facilitating the regional procurement of balancing capacity;

(l) supporting transmission system operators, at their request, in the optimisation of inter-transmission system operators settlements;

(m) carrying out tasks related to the identification of regional electricity crisis scenarios if and to the extent they are delegated to the regional coordination centres pursuant to Article 6(1) of Regulation (EU) 2019/941;

(n) carrying out tasks related to the seasonal adequacy assessments if and to the extent that they are delegated to the regional coordination centres pursuant to Article 9(2) of Regulation (EU) 2019/941;

(o) calculating the value for the maximum entry capacity available for the participation of foreign capacity in capacity mechanisms for the purposes of issuing a recommendation pursuant to Article 26(7);

(p) carrying out tasks related to supporting transmission system operators in the identification of needs for new transmission capacity, for upgrade of existing transmission capacity or their alternatives, to be submitted to the regional groups established pursuant to Regulation (EU) No 347/2013 and included in the ten-year network development plan referred to in Article 51 of Directive (EU) 2019/944.

The tasks referred to in the first subparagraph are set out in more detail in Annex I.

2.On the basis of a proposal by the Commission or a Member State, the Committee established by Article 68 of Directive (EU) 2019/944 shall issue an opinion on the assignment of new advisory tasks to regional coordination centres. Where that Committee issues a favourable opinion on the assignment of new advisory tasks, the regional coordination centres shall carry out those tasks on the basis of a proposal developed by the ENTSO for Electricity and approved by ACER in accordance with the procedure set out in Article 27.

3.Transmission system operators shall provide their regional coordination centres with the information necessary to carry out its tasks.

4.Regional coordination centres shall provide transmission system operators of the system operation region with all information necessary to implement the coordinated actions and recommendations issued by regional coordination centres.

5.For the tasks set out in this Article and not already covered by the relevant network codes or guidelines, the ENTSO for Electricity shall develop a proposal in accordance with the procedure set out in Article 27. Regional coordination centres shall carry out those tasks on the basis of the proposal following its approval by ACER.

Article 38

Cooperation within and between regional coordination centres

The day-to-day coordination within and between regional coordination centres shall be managed through cooperative processes among the transmission system operators of the region, including arrangements for coordination between regional coordination centres where relevant. The cooperative process shall be based on:

(a) working arrangements to address planning and operational aspects relevant to the tasks referred to in Article 37;

(b) a procedure for sharing analysis and consulting on regional coordination centres' proposals with the transmission system operators in the system operation region and relevant stakeholders and with other regional coordination centres, in an efficient and inclusive manner, in the exercise of the operational duties and tasks, in accordance with Article 40;

(c) a procedure for the adoption of coordinated actions and recommendations in accordance with Article 42.

Article 39

Working arrangements

1.Regional coordination centres shall develop working arrangements that are efficient, inclusive, transparent and facilitate consensus, in order to address planning and operational aspects related to the tasks to be carried out, taking into account, in particular, the specificities and requirements of those tasks as specified in Annex I. Regional coordination centres shall also develop a process for the revision of those working arrangements.

2.Regional coordination centres shall ensure that the working arrangements referred to in paragraph 1 contain rules for the notification of parties concerned.

Article 40

Consultation procedure

1.Regional coordination centres shall develop a procedure to organise, in the exercise of their daily operational duties and tasks, the appropriate and regular consultation of transmission system operators in the system operation region, other regional coordination centres and of relevant stakeholders. In order to ensure that regulatory issues can be addressed, regulatory authorities shall be involved when required.

2.Regional coordination centres shall consult the Member States in the system operation region and, where there is a regional forum, their regional forums on matters of political relevance excluding the day-to-day activities of regional coordination centres and the implementation of their tasks. Regional coordination centres shall take due account of the recommendations of the Member States and where applicable, of their regional forums.

Article 41

Transparency

1.Regional coordination centres shall develop a process for stakeholder involvement and shall organise regular meetings with stakeholders to discuss matters relating to the efficient, secure and reliable operation of the interconnected system and to identify shortcomings and propose improvements.

2.The ENTSO for Electricity and regional coordination centres shall operate in full transparency towards stakeholders and the general public. They shall publish all relevant documentation on their respective websites.

Article 42

Adoption and review of coordinated actions and recommendations

1.The transmission system operators in a system operation region shall develop a procedure for the adoption and revision of coordinated actions and recommendations issued by regional coordination centres in accordance with the criteria set out in paragraphs 2, 3, and 4.

2.Regional coordination centres shall issue coordinated actions to the transmission system operators in respect of the tasks referred to in points (a) and (b) of Article 37(1). Transmission system operators shall implement the coordinated actions except where the implementation of the coordinated actions would result in a violation of the operational security limits defined by each transmission system operator in accordance with the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

Where a transmission system operator decides not to implement a coordinated action for the reasons set out in this paragraph, it shall transparently report the detailed reasons to the regional coordination centre and the transmission system operators of the system operation region without undue delay. In such cases, the regional coordination centre shall assess the impact of that decision on the other transmission system operators of the system operation region and may propose a different set of coordinated actions subject to the procedure set out in paragraph 1.

3.Regional coordination centres shall issue recommendations to the transmission system operators in relation to the tasks listed in points (c) to (p) of Article 37(1) or assigned in accordance with Article 37(2).

Where a transmission system operator decides to deviate from a recommendation as referred to in paragraph 1, it shall submit a justification for its decision to regional coordination centres and to the other transmission system operators of the system operation region without undue delay.

4.The review of coordinated actions or a recommendation shall be triggered at the request of one or more of the transmission system operators of the system operation region. Following the review of the coordinated action or recommendation, regional coordination centres shall confirm or modify the measure.

5.Where a coordinated action is subject to review in accordance with paragraph 4 of this Article, the request for review shall not suspend the coordinated action except where the implementation of the coordinated action would result in a violation of the operational security limits defined by each individual transmission system operator in accordance with the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

6.Upon the proposal of a Member State or the Commission and following consultation with the Committee established by Article 68 of Directive (EU) 2019/944, the Member States in a system operation region may jointly decide to grant the competence to issue coordinated actions to their regional coordination centre for one or more of the tasks provided for in points (c) to (p) of Article 37(1) of this Regulation.

Article 43

Management board of regional coordination centres

1.In order to adopt measures related to their governance and to monitor their performance, the regional coordination centres shall establish a management board.

2.The management board shall be composed of members representing all the transmission system operators that participate in the relevant regional coordination centre.

3.The management board shall be responsible for:

(a) drafting and endorsing the statutes and rules of procedure of regional coordination centres;

(b) deciding upon and implementing the organisational structure;

(c) preparing and endorsing the annual budget;

(d) developing and endorsing the cooperative processes in accordance with Article 38.

4.The competences of the management board shall exclude those that are related to the day-to-day activities of regional coordination centres and the performance of its tasks.

Article 44

Organisational structure

1.The transmission system operators of a system operation region shall establish the organisational structure of regional coordination centres that supports the safety of their tasks.

Their organisational structure shall specify:

(a) the powers, duties and responsibilities of the personnel;

(b) the relationship and reporting lines between different parts and processes of the organisation.

2.Regional coordination centres may establish regional desks to address sub-regional specificities or establish back-up regional coordination centres for the efficient and reliable exercise of their tasks where proven to be strictly necessary.

Article 45

Equipment and staff

Regional coordination centres shall be equipped with all human, technical, physical and financial resources necessary for fulfilling their obligations under this Regulation and carrying out their tasks independently and impartially.

Article 46

Monitoring and reporting

1.Regional coordination centres shall establish a process for the continuous monitoring of at least:

(a) their operational performance;

(b) the coordinated actions and recommendations issued, the extent to which the coordinated actions and recommendations have been implemented by the transmission system operators and the outcome achieved;

(c) the effectiveness and efficiency of each of the tasks for which they are responsible and, where applicable, the rotation of those tasks.

2.Regional coordination centres shall account for their costs in a transparent manner and report them to ACER and to the regulatory authorities in the system operation region.

3.Regional coordination centres shall submit an annual report on the outcome of the monitoring provided for in paragraph 1 and information on their performance to the ENTSO for Electricity, ACER, the regulatory authorities in the system operation region and the Electricity Coordination Group.

4.Regional coordination centres shall report any shortcomings that they identify in the monitoring process under paragraph 1 to the ENTSO for Electricity, the regulatory authorities in the system operation region, ACER and the other competent authorities of Member States responsible for the prevention and management of crisis situations. On the basis of that report, the relevant regulatory authorities of the system operation region may propose measures to address the shortcomings to the regional coordination centres.

5.Without prejudice to the need to protect security and the confidentiality of commercially sensitive information, regional coordination centres shall make public the reports referred to in paragraphs 3 and 4.

Article 47

Liability

In proposals for the establishment of regional coordination centres in accordance with Article 35, the transmission system operators in the system operation region shall include the necessary steps to cover liability related to the execution of regional coordination centres' tasks. The method employed to provide the cover shall take into account the legal status of regional coordination centres and the level of commercial insurance cover available.

Article 48

Ten-year network development plan

1.The Union-wide network development plan referred to under point (b) of Article 30(1) shall include the modelling of the integrated network, scenario development and an assessment of the resilience of the system.

The Union-wide network development plan shall, in particular:

(a) build on national investment plans, taking into account regional investment plans as referred to in Article 34(1) of this Regulation, and, if appropriate, Union aspects of network planning as set out in Regulation (EU) No 347/2013; it shall be subject to a cost-benefit analysis using the methodology established as set out in Article 11 of that Regulation;

(b) regarding cross-border interconnections, also build on the reasonable needs of different system users and integrate long-term commitments from investors referred to in Articles 44 and 51 of Directive (EU) 2019/944; and

(c) identify investment gaps, in particular with respect to cross-border capacities.

In regard to point (c) of the first subparagraph, a review of barriers to the increase of cross-border capacity of the network arising from different approval procedures or practices may be annexed to the Union–wide network development plan.

2.ACER shall provide an opinion on the national ten-year network development plans to assess their consistency with the Union–wide network development plan. If ACER identifies inconsistencies between a national ten-year network development plan and the Union–wide network development plan, it shall recommend amending the national ten-year network development plan or the Union–wide network development plan as appropriate. If such a national ten-year network development plan is developed in accordance with Article 51 of Directive (EU) 2019/944, ACER shall recommend that the regulatory authority amend the national ten-year network development plan in accordance with Article 51(7) of that Directive and

inform the Commission thereof.

Article 49

Inter-transmission system operator compensation mechanism

1.Transmission system operators shall receive compensation for costs incurred as a result of hosting cross-border flows of electricity on their networks.

2.The compensation referred to in paragraph 1 shall be paid by the operators of national transmission systems from which cross-border flows originate and the systems where those flows end.

3.Compensation payments shall be made on a regular basis with regard to a given period in the past. Ex-post adjustments of compensation paid shall be made where necessary, to reflect costs actually incurred.

The first period for which compensation payments are to be made shall be determined in the guidelines referred to in Article 61.

4.The Commission shall adopt delegated acts in accordance with Article 68, supplementing this Regulation, establishing the amounts of compensation payments payable.

5.The magnitude of cross-border flows hosted and the magnitude of cross-border flows designated as originating or ending in national transmission systems shall be determined on the basis of the physical flows of electricity actually measured during a given period.

6.The costs incurred as a result of hosting cross-border flows shall be established on the basis of the forward-looking long-run average incremental costs, taking into account losses, investment in new infrastructure, and an appropriate proportion of the cost of existing infrastructure, in so far as such infrastructure is used for the transmission of cross-border flows, in particular taking into account the need to guarantee security of supply. When establishing the costs incurred, recognised standard-costing methodologies shall be used. Benefits that a network incurs as a result of hosting cross-border flows shall be taken into account to reduce the compensation received.

7.For the purpose of the inter-transmission system operator compensation mechanism only, where transmission networks of two or more Member States form part, in whole or in part, of a single control block, the control block as a whole shall be considered as forming part of the transmission network of one of the Member States concerned, in order to avoid flows within control blocks being considered as cross-border flows under point (b) of Article 2(2) and giving rise to compensation payments under paragraph 1 of this Article. The regulatory authorities of the Member States concerned may decide which of the Member States concerned shall be that of which the control block as a whole is to be considered to form part.

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.

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 51

Certification of transmission system operators

1.The Commission shall examine any notification of a decision on the certification of a transmission system operator as laid down in Article 52(6) of Directive (EU) 2019/944 as soon as it is received. Within two months of receipt of such notification, the Commission shall deliver its opinion to the relevant regulatory authority as to its compatibility with Article 43 and either Article 52(2) or Article 53 of Directive (EU) 2019/944.

When preparing the opinion referred to in the first subparagraph, the Commission may request ACER to provide its opinion on the regulatory authority's decision. In such a case, the two-month period referred to in the first subparagraph shall be extended by two further months.

In the absence of an opinion by the Commission within the periods referred to in the first and second subparagraphs, the Commission shall be considered not to raise objections to the regulatory authority's decision.

2.Within two months of receipt of an opinion of the Commission, the regulatory authority shall adopt its final decision regarding the certification of the transmission system operator, taking the utmost account of that opinion. The regulatory authority's decision and the Commission's opinion shall be published together.

3.At any time during the procedure, regulatory authorities or the Commission may request from a transmission system operator or an undertaking performing any of the functions of generation or supply any information relevant to the fulfilment of their tasks under this Article.

4.Regulatory authorities and the Commission shall protect the confidentiality of commercially sensitive information.

5.Where the Commission has received notification of the certification of a transmission system operator under Article 43(9) of Directive (EU) 2019/944, the Commission shall take a decision relating to

certification. The regulatory authority shall comply with the Commission decision.

CHAPTER VI

DISTRIBUTION SYSTEM OPERATION

Article 52

European entity for distribution system operators

1.Distribution system operators shall cooperate at Union level through the EU DSO entity, in order to promote the completion and functioning of the internal market for electricity, and to promote optimal management and a coordinated operation of distribution and transmission systems. Distribution system operators who wish to participate in the EU DSO entity shall have the right to become registered members of the entity.

Registered members may participate in the EU DSO entity directly or be represented by a national association designated by the Member State or by a Union-level association.

2.Distribution system operators are entitled to associate themselves through the establishment of the EU DSO entity. The EU DSO entity shall carry out its tasks and procedures in accordance with Article 55. As an expert entity working for the common Union interest, the EU DSO entity shall neither represent particular interests nor seek to influence the decision-making process to promote specific interests.

3.Members of the EU DSO entity shall be subject to registration and to the payment of a fair and proportionate membership fee that reflects the number of customers connected to the distribution system operator concerned.

Article 53

Establishment of the EU DSO entity

1.The EU DSO entity shall consist of, at least, a general assembly, a board of directors, a strategic advisor group, expert groups and a secretary-general.

2.By 5 July 2020, the distribution system operators shall submit to the Commission and to ACER, the draft statutes, in accordance with Article 54, including a code of conduct, a list of registered members, the draft rules of procedure, including the rules of procedures on the consultation with the ENTSO for Electricity and other stakeholders and the financing rules, of the EU DSO entity to be established.

The draft rules of procedure of the EU DSO entity shall ensure balanced representation of all participating distribution system operators.

3.Within two months of receipt of the draft statutes, the list of members and the draft rules of procedure, ACER shall provide the Commission with its opinion, after consulting the organisations representing all stakeholders, in particular distribution system users.

4.Within three months of receipt of ACER's opinion, the Commission shall deliver an opinion on the draft statutes, the list of members and the draft rules of procedure, taking into account ACER's opinion as provided for in paragraph 3.

5.Within three months of receipt of the Commission's positive opinion, the distribution system operators shall establish the EU DSO entity and shall adopt and publish its statutes and rules of procedure.

6.The documents referred to in paragraph 2 shall be submitted to the Commission and to ACER where there are changes thereto or upon the reasoned request of either of them. The Commission and ACER shall deliver an opinion in line with the process set out in paragraphs 2, 3 and 4.

7.The costs related to the activities of the EU DSO entity shall be borne by the distribution system operators that are registered members and shall be taken into account in the calculation of tariffs. Regulatory authorities shall only approve costs that are reasonable and proportionate.

Article 54

Principal rules and procedures for the EU DSO entity

1.The statutes of the EU DSO entity adopted in accordance with Article 53 shall safeguard the following principles:

(a) participation in the work of the EU DSO entity is limited to registered members with the possibility of delegation within the membership;

(b) strategic decisions regarding the activities of the EU DSO entity as well as policy guidelines for the board of directors are adopted by the general assembly;

(c) decisions of the general assembly are adopted according with the following rules:

  (i) each member disposes of a number of votes proportional to the number of that member's customers;

  (ii) 65 % of the votes attributed to the members are cast; and

  (iii) the decision is adopted by a majority of 55 % of the members;

(d) decisions of the general assembly are rejected according with the following rules:

  (i) each member disposes of a number of votes proportional to the number of that member's customers;

  (ii) 35 % of the votes attributed to the members are cast; and

  (iii) the decision is rejected by at least 25 % of the members;

(e) the board of directors is elected by the general assembly for a mandate of a maximum of four years;

(f) the board of directors nominates the President and the three Vice-Presidents from among the members of the board;

(g) cooperation between transmission system operators and distribution system operators pursuant to Articles 56 and 57 is led by the board of directors;

(h) decisions of the board of directors are adopted by an absolute majority;

(i) on the basis of a proposal by the board of directors, the secretary general is appointed by the general assembly from among its members for a mandate of four years, renewable once;

(j) on the basis of a proposal by the board of directors, Expert Groups are appointed by the general assembly and do not exceed 30 members, with the possibility of one-third of the members coming from outside the membership of EU DSO; in addition, one ‘country’ expert group shall be established and shall consist of one representative of distribution system operators from each Member State.

2.Procedures adopted by the EU DSO entity shall safeguard the fair and proportionate treatment of its members and shall reflect the diverse geographical and economic structure of its membership. In particular, the procedures shall provide that:

(a) the board of directors is composed of the President of the Board and 27 members' representatives, of which:

(i) nine are representatives of members with more than 1 million grid users;

(ii) nine are representatives of members with more than 100 000 and less than 1 million grid users; and

(iii) nine are representatives of members with less than 100 000 grid users;

(b) representatives of existing DSO associations are permitted to participate as observers at the meetings of the board of directors;

(c) the board of directors are not permitted to consist of more than three representatives of members who are based in the same Member State or in the same industrial group;

(d) each Vice-President of the Board is nominated among representatives of members in each category described in point (a);

(e) representatives of members who are based in one Member State or the same industrial group do not constitute the majority of the participants in the Expert Group;

(f) the board of directors establishes a Strategic Advisory group that provides its opinion to the board of directors and the Expert Groups and consists of representatives of the European DSO associations and representatives of those Member States which are not represented in the board of directors.

Article 55

Tasks of the EU DSO entity

1.The tasks of the EU DSO entity shall be the following:

(a) promoting operation and planning of distribution networks in coordination with the operation and planning of transmission networks;

(b) facilitating the integration of renewable energy resources, distributed generation and other resources embedded in the distribution network such as energy storage;

(c) facilitating demand side flexibility and response and distribution grid users' access to markets;

(d) contributing to the digitalisation of distribution systems including deployment of smart grids and intelligent metering systems;

(e) supporting the development of data management, cyber security and data protection in cooperation with relevant authorities and regulated entities;

(f) participating in the development of network codes which are relevant to the operation and planning of distribution grids and the coordinated operation of the transmission networks and distribution networks pursuant to Article 59.

2.In addition the EU DSO entity shall:

(a) cooperate with the ENTSO for Electricity on the monitoring of implementation of the network codes and guidelines adopted pursuant to this Regulation which are relevant to the operation and planning of distribution grids and the coordinated operation of the transmission networks and distribution networks;

(b) cooperate with the ENTSO for Electricity and adopt best practices on the coordinated operation and planning of transmission and distribution systems including issues such as exchange of data between operators and coordination of distributed energy resources;

(c) work on identifying best practices on the areas identified in paragraph 1 and for the introduction of energy efficiency improvements in the distribution network;

(d) adopt an annual work programme and an annual report;

(e) operate in accordance with competition law and ensure neutrality.

Article 56

Consultations in the network code development process

1.While participating in the development of new network codes pursuant to Article 59, the EU DSO entity shall conduct an extensive consultation process, at an early stage and in an open and transparent manner, involving all relevant stakeholders, and, in particular, organisations representing such stakeholders, in accordance with the rules of procedure on consultation referred to in Article 53. That consultation shall also involve regulatory authorities and other national authorities, supply and generation undertakings, system users including customers, technical bodies and stakeholder platforms. It shall aim at identifying the views and proposals of all relevant parties during the decision-making process.

2.All documents and minutes of meetings related to the consultations referred to in paragraph 1 shall be made public.

3.The EU DSO entity shall take into consideration the views provided during the consultations. Before adopting proposals for the network codes referred to in Article 59 the EU DSO entity shall indicate how it has taken the observations received during the consultation into consideration. It shall provide reasons where it has not taken such observations into account.

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.

CHAPTER VII

NETWORK CODES AND GUIDELINES

Article 58

Adoption of network codes and guidelines

1.The Commission may, subject to the empowerments in Articles 59, 60 and 61, adopt implementing or delegated acts. Such acts may either be adopted as network codes on the basis of text proposals developed by the ENTSO for Electricity, or, where so provided for in the priority list pursuant to Article 59(3), by the EU DSO entity, where relevant in cooperation with the ENTSO for Electricity, and ACER pursuant to the procedure in Article 59, or as guidelines pursuant to the procedure in Article 61.

2.The network codes and guidelines shall:

(a) ensure that they provide the minimum degree of harmonisation required to achieve the aims of this Regulation;

(b) take into account regional specificities, where appropriate;

(c) not go beyond what is necessary for the purposes of point (a); and

(d) be without prejudice to the Member States' right to establish national network codes which do not affect cross-zonal trade.

Article 59

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 implementing Article 6 of Directive (EU) 2019/944 and Article 7 to 10, Articles 13 to 17 and Articles 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, the firmness of allocated cross-zonal capacity, congestion income distribution, 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, 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 to it within a reasonable period not exceeding six months of receipt of the Commission's request 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.

Article 60

Amendments of network codes

1.The Commission is empowered to amend the network codes within the areas listed in Article 59(1) and (2) in accordance with the relevant procedure set out in that Article. ACER may also propose amendments to the networks codes in accordance with paragraphs 2 and 3 of this Article.

2.Persons who are likely to have an interest in any network code adopted under Article 59, including the ENTSO for Electricity, the EU DSO entity, regulatory authorities, transmission system operators, distribution system operators, system users and consumers, may propose draft amendments to that network code to ACER. ACER may also propose amendments on its own initiative.

3.ACER may make reasoned proposals to the Commission for amendments, explaining how such proposals are consistent with the objectives of the network codes set out in Article 59(3) of this Regulation. Where it considers an amendment proposal to be admissible and where it proposes amendments on its own initiative, ACER shall consult all stakeholders in accordance with Article 14 of Regulation (EU) 2019/942.

Article 61

Guidelines

1.The Commission is empowered to adopt binding guidelines in the areas listed in this Article.

2.The Commission is empowered to adopt guidelines in the areas where such acts could also be developed under the network code procedure pursuant to Article 59(1) and (2). Those guidelines shall be adopted in the form of delegated or implementing acts, depending on the relevant empowerment provided for in this Regulation.

3.The Commission is empowered to adopt delegated acts in accordance with Article 68 supplementing this Regulation by setting out guidelines relating to the inter-transmission system operator compensation mechanism. Those guidelines shall specify, in accordance with the principles set out in Articles 18 and 49:

(a) details of the procedure for determining which transmission system operators are liable to pay compensation for cross-border flows including as regards the split between the operators of national transmission systems from which cross-border flows originate and the systems where those flows end, in accordance with Article 49(2);

(b) details of the payment procedure to be followed, including the determination of the first period for which compensation is to be paid, in accordance with the second subparagraph of Article 49(3);

(c) details of methodologies for determining the cross-border flows hosted for which compensation is to be paid under Article 49, in terms of both quantity and type of flows, and the designation of the magnitudes of such flows as originating or ending in transmission systems of individual Member States, in accordance with Article 49(5);

(d) details of the methodology for determining the costs and benefits incurred as a result of hosting cross-border flows, in accordance with Article 49(6);

(e) details of the treatment of electricity flows originating or ending in countries outside the European Economic Area in the context of the inter-transmission system operator compensation mechanism; and

(f) arrangements for the participation of national systems which are interconnected through direct current lines, in accordance with Article 49.

4.Where appropriate, the Commission may adopt implementing acts setting out guidelines providing the minimum degree of harmonisation required to achieve the aim of this Regulation. Those guidelines may specify:

(a) details of rules for the trading of electricity implementing Article 6 of Directive (EU) 2019/944 and Articles 5 to 10, 13 to 17, 35, 36 and 37 of this Regulation;

(b) details of investment incentive rules for interconnector capacity including locational signals implementing Article 19.

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

5.The Commission may adopt implementing acts setting out guidelines on operational coordination between transmission system operators at Union level. Those guidelines shall be consistent with and build upon the network codes referred to in Article 59 and shall build upon the adopted specifications referred to in point (i) of Article 30(1). When adopting those guidelines, the Commission shall take into account differing regional and national operational requirements.

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

6.When adopting or amending guidelines, the Commission shall consult ACER, the ENTSO for Electricity, the EU DSO entity and, where relevant, other stakeholders.

Article 62

Right of Member States to provide for more detailed measures

This Regulation shall be without prejudice to the rights of Member States to maintain or introduce measures that contain more detailed provisions than those set out in this Regulation, in the guidelines referred to in

Article 61 or in the network codes referred to in Article 59, provided that those measures are compatible with Union law.

CHAPTER VIII

FINAL PROVISIONS

Article 63

New interconnectors

1.New direct current interconnectors may, upon request, be exempted, for a limited period, from Article 19(2) and (3) of this Regulation and from Articles 6 and 43, Article 59(7) and Article 60(1) of Directive (EU) 2019/944 provided that the following conditions are met:

(a) the investment enhances competition in electricity supply;

(b) the level of risk attached to the investment is such that the investment would not take place unless an exemption is granted;

(c) the interconnector is owned by a natural or legal person which is separate, at least in terms of its legal form, from the system operators in whose systems that interconnector is to be built;

(d) charges are levied on users of that interconnector;

(e) since the partial market opening referred to in Article 19 of Directive 96/92/EC of the European Parliament and of the Council(9), no part of the capital or operating costs of the interconnector has been recovered from any component of charges made for the use of transmission or distribution systems linked by the interconnector; and

(f) an exemption would not be to the detriment of competition or the effective functioning of the internal market for electricity, or the efficient functioning of the regulated system to which the interconnector is linked.

2.Paragraph 1 shall also apply, in exceptional cases, to alternating current interconnectors provided that the costs and risks of the investment in question are particularly high when compared with the costs and risks normally incurred when connecting two neighbouring national transmission systems by an alternating current interconnector.

3.Paragraph 1 shall also apply to significant increases of capacity in existing interconnectors.

4.The decision granting an exemption as referred to in paragraphs 1, 2 and 3 shall be taken on a case-by-case basis by the regulatory authorities of the Member States concerned. An exemption may cover all or part of the capacity of the new interconnector, or of the existing interconnector with significantly increased capacity.

Within two months of receipt of the request for exemption by the last of the regulatory authorities concerned, ACER may provide those regulatory authorities with an opinion. The regulatory authorities may base their decision on that opinion.

In deciding to grant an exemption, regulatory authorities shall take into consideration, on a case-by-case basis, the need to impose conditions regarding the duration of the exemption and non-discriminatory access to the interconnector. When deciding on those conditions, regulatory authorities shall, in particular, take account of additional capacity to be built or the modification of existing capacity, the time-frame of the project and national circumstances.

Before granting an exemption, the regulatory authorities of the Member States concerned shall decide on the rules and mechanisms for management and allocation of capacity. Those congestion-management rules shall include the obligation to offer unused capacity on the market and users of the facility shall be entitled to trade their contracted capacities on the secondary market. In the assessment of the criteria referred to in points (a), (b) and (f) of paragraph 1, the results of the capacity-allocation procedure shall be taken into account.

Where all the regulatory authorities concerned have reached agreement on the exemption decision within six months of receipt of the request, they shall inform ACER of that decision.

The exemption decision, including any conditions referred to in the third subparagraph of this paragraph, shall be duly reasoned and published.

5.The decision referred to in paragraph 4 shall be taken by ACER:

(a) where the regulatory authorities concerned have not been able to reach an agreement within six months from the date on which the last of those regulatory authorities received the exemption request; or

(b) upon a joint request from the regulatory authorities concerned.

Before taking such a decision, ACER shall consult the regulatory authorities concerned and the applicants.

6.Notwithstanding paragraphs 4 and 5, Member States may provide for the regulatory authority or ACER, as the case may be, to submit, for a formal decision, to the relevant body in the Member State, its opinion on the request for an exemption. That opinion shall be published together with the decision.

7.A copy of every request for exemption shall be transmitted for information without delay by the regulatory authorities to the Commission and ACER on receipt. The decision shall be notified, without delay, by the regulatory authorities concerned or by ACER (the notifying bodies), to the Commission, together with all the relevant information with respect to the decision. That information may be submitted to the Commission in aggregate form, enabling the Commission to reach a well-founded decision. In particular, the information shall contain:

(a) the detailed reasons on the basis of which the exemption was granted or refused, including the financial information justifying the need for the exemption;

(b) the analysis undertaken of the effect on competition and the effective functioning of the internal market for electricity resulting from the grant of the exemption;

(c) the reasons for the time period and the share of the total capacity of the interconnector in question for which the exemption is granted; and

(d) the result of the consultation of the regulatory authorities concerned.

8.Within 50 working days of the day following that of receipt of the notification under paragraph 7, the Commission may take a decision requesting the notifying bodies to amend or withdraw the decision to grant an exemption. That period may be extended by an additional 50 working days where further information is requested by the Commission. The additional period shall begin on the day following receipt of the complete information. The initial period may also be extended by consent of both the Commission and the notifying bodies.

Where the requested information is not provided within the period set out in the Commission's request, the notification shall be deemed to be withdrawn unless, before the expiry of that period, either the period is extended by consent of both the Commission and the notifying bodies, or the notifying bodies, in a duly reasoned statement, inform the Commission that they consider the notification to be complete.

The notifying bodies shall comply with a Commission decision to amend or withdraw the exemption decision within one month of receipt and shall inform the Commission accordingly.

The Commission shall protect the confidentiality of commercially sensitive information.

The Commission's approval of an exemption decision shall expire two years after the date of its adoption in the event that construction of the interconnector has not started by that date, and five years after the date of its adoption if the interconnector has not become operational by that date, unless the Commission decides, on the basis of a reasoned request by the notifying bodies, that any delay is due to major obstacles beyond the control of the person to whom the exemption has been granted.

9.Where the regulatory authorities of the Member States concerned decide to modify an exemption decision, they shall notify their decision to the Commission without delay, together with all the relevant information

with respect to the decision. Paragraphs 1 to 8 shall apply to the decision to modify an exemption decision, taking into account the particularities of the existing exemption.

10.The Commission may, on request or on its own initiative, reopen proceedings relating to an exemption request where:

(a) taking due account of the legitimate expectations of the parties and of the economic balance achieved in the original exemption decision, there has been a material change in any of the facts on which the decision was based;

(b) the undertakings concerned act contrary to their commitments; or

(c) the decision was based on incomplete, incorrect or misleading information, which was provided by the parties.

11.The Commission is empowered to adopt delegated acts in accordance with Article 68 supplementing this Regulation by specifying guidelines for the application of the conditions laid down in paragraph 1 of this Article and setting out the procedure to be followed for the application of paragraphs 4 and 7 to 10 of this Article.

Article 64

Derogations

1.Member States may apply for derogations from the relevant provisions of Articles 3 and 6, Article 7(1), Article 8(1) and (4), Articles 9, 10 and 11, Articles 14 to 17, Articles 19 to 27, Articles 35 to 47 and Article 51 provided that:

(a) the Member State can demonstrate that there are substantial problems for the operation of small isolated systems and small connected systems;

(b) outermost regions within the meaning of Article 349 TFEU cannot be interconnected with the Union's energy market for evident physical reasons.

In the situation referred to in point (a) of the first subparagraph, the derogation shall be limited in time and shall subject to conditions aiming to increase competition and integration with the internal market for electricity.

In the situation referred to in point (b) of the first subparagraph, the derogation shall not be limited in time.

The Commission shall inform the Member States of those applications before adopting the decision, protecting the confidentiality of commercially sensitive information.

A derogation granted under this Article shall aim to ensure that it does not obstruct the transition towards renewable energy, increased flexibility, energy storage, electromobility and demand response.

In its decision granting a derogation the Commission shall set out to what extent the derogation is to take into account the application of the network codes and guidelines.

2.Articles 3, 5 and 6, Article 7(1), points (c) and (g) of Article 7(2)) Articles 8 to 17, Article 18(5) and (6), Articles 19 and 20, Article 21(1), (2) and (4) to (8), point (c) of Article 22(1), points (b) and (c) of Article 22(2), the last subparagraph of Article 22 (2), Articles 23 to 27, Article 34(1), (2) and (3), Articles 35 to 47, Article 48(2) and Articles 49 and 51 shall not apply to Cyprus until its transmission system is connected to other Member States' transmission systems via interconnections.

If the transmission system of Cyprus is not connected to other Member States' transmission systems by means of interconnections by 1 January 2026, Cyprus shall assess the need for derogation from those provisions and may submit a request to prolong the derogation to the Commission. The Commission shall assess whether the application of the provisions risks causing substantial problems to the operation of the

electricity system in Cyprus or whether their application in Cyprus is expected to provide benefits to the functioning of the market. On the basis of that assessment, the Commission shall issue a reasoned decision to prolong the derogation in full or in part. The decision shall be published in the *Official Journal of the European Union*.

3.This Regulation shall not affect the application of the derogations granted under Article 66 of Directive (EU) 2019/944.

4.In relation to the attainment of the 2030 interconnection target, as stipulated under Regulation (EU) 2018/1999, the electricity link between Malta and Italy shall be duly taken into account.

Article 65

Provision of information and confidentiality

1.Member States and the regulatory authorities shall, on request, provide the Commission with all the information necessary for the purposes of enforcing this Regulation.

The Commission shall set a reasonable time limit within which the information is to be provided, taking into account the complexity and urgency of the information required.

2.If the Member State or the regulatory authority concerned does not provide the information referred to in paragraph 1 within the time limit referred to in paragraph 1 the Commission may request all the information necessary for the purpose of enforcing this Regulation directly from the undertakings concerned.

When sending a request for information to an undertaking, the Commission shall, at the same time, forward a copy of the request to the regulatory authorities of the Member State in whose territory the seat of the undertaking is situated.

3.In its request for information under paragraph 1, the Commission shall state the legal basis of the request, the time limit within which the information is to be provided, the purpose of the request, and the penalties provided for in Article 66(2) for supplying incorrect, incomplete or misleading information.

4.The owners of the undertakings or their representatives and, in the case of legal persons, the natural persons authorised to represent the undertaking by law or by their instrument of incorporation, shall supply the information requested. Where lawyers are authorised to supply the information on behalf of their client, the client shall remain fully responsible in the event that the information supplied is incomplete, incorrect or misleading.

5.Where an undertaking does not provide the information requested within the time limit set by the Commission or supplies incomplete information, the Commission may by decision require the information to be provided. That decision shall specify what information is required and set an appropriate time limit within which it is to be supplied. It shall indicate the penalties provided for in Article 66(2). It shall also indicate the right to have the decision reviewed by the Court of Justice of the European Union.

The Commission shall, at the same time, send a copy of its decision to the regulatory authorities of the Member State within the territory of which the person is resident or the seat of the undertaking is situated.

6.The information referred to in paragraphs 1 and 2 shall be used only for the purposes of enforcing this Regulation.

The Commission shall not disclose information acquired pursuant to this Regulation where that information is covered by the obligation of professional secrecy.

Article 66

Penalties

1.Without prejudice to paragraph 2 of this Article, the Member States shall lay down the rules on penalties applicable to infringements of this Regulation, the network codes adopted pursuant to Article 59, and the guidelines adopted pursuant to Article 61 and shall take all measures necessary to ensure that they are implemented. The penalties provided for shall be effective, proportionate and dissuasive. Member States shall, without delay, notify the Commission of those rules and of those measures and shall notify it without delay of any subsequent amendment affecting them.

2.The Commission may, by decision, impose on undertakings fines not exceeding 1 % of the total turnover in the preceding business year where, intentionally or negligently, those undertakings supply incorrect, incomplete or misleading information in response to a request made pursuant to Article 65(3) or fail to supply information within the time-limit set in a decision adopted pursuant to the first subparagraph of Article 65(5). In setting the amount of a fine, the Commission shall have regard to the gravity of the failure to comply with the requirements referred to in paragraph 1 of this Article.

3.The penalties provided for pursuant to paragraph 1 and any decisions taken pursuant to paragraph 2 shall not be of a criminal law nature.

Article 67

Committee procedure

1.The Commission shall be assisted by the committee set up by Article 68 of Directive (EU) 2019/944. That committee shall be a committee within the meaning of Regulation (EU) No 182/2011.

2.Where reference is made to this paragraph, Article 5 of Regulation (EU) No 182/2011 shall apply.

Article 68

Exercise of the delegation

1.The power to adopt delegated acts is conferred on the Commission subject to the conditions laid down in this Article.

2.The power to adopt delegated acts referred to in Article 34(3), Article 49(4), Article 59(2), Article 61(2) and Article 63(11) shall be conferred on the Commission until 31 December 2028. The Commission shall draw up a report in respect of the delegation of power not later than nine months before the end of that period and, if applicable, before the end of subsequent periods. The delegation of power shall be tacitly extended for periods of eight years, unless the European Parliament or the Council opposes such extension not later than three months before the end of each period.

3.The delegation of power referred to in Article 34(3), Article 49(4), Article 59(2), Article 61(2) and Article 63(11) may be revoked at any time by the European Parliament or by the Council. A decision to revoke shall put an end to the delegation of power specified in that decision. It shall take effect on the day following the publication of the decision in the *Official Journal of the European Union* or at a later date specified therein. It shall not affect the validity of any delegated act already in force.

4.Before adopting a delegated act, the Commission shall consult experts designated by each Member State in accordance with the principles laid down in the Interinstitutional Agreement of 13 April 2016 on Better Law-Making.

5.As soon as it adopts a delegated act, the Commission shall notify it simultaneously to the European Parliament and to the Council.

6.A delegated act adopted pursuant to Article 34(3), Article 49(4), Article 59(2), Article 61(2) and Article 63(11) shall enter into force only if no objection has been expressed either by the European Parliament or by the Council within a period of two months of notification of that act to the European Parliament and the Council or if, before the expiry of that period, the European Parliament and the Council have both informed the Commission that they will not object. That period shall be extended by two months at the initiative of the European Parliament or of the Council.

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 the Commission shall review this Regulation and shall submit a report to the European Parliament and to the Council on the basis of that review, accompanied by a legislative proposal where appropriate.

Article 70

Repeal

Regulation (EC) No 714/2009 is repealed. References to the repealed Regulation shall be construed as references to this Regulation and shall be read in accordance with the correlation table set out in Annex III.

Article 71

Entry into force

1.This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

2.It shall apply from 1 January 2020.

Notwithstanding the first subparagraph, Articles 14, 15, 22(4), 23(3) and (6), 35, 36 and 62 shall apply from the date of entry into force of this Regulation. For the purpose of implementing Article 14(7) and Article 15(2), Article 16 shall apply from that date.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels, 5 June 2019.

ANNEX I

TASKS OF REGIONAL COORDINATION CENTRES

1.Coordinated capacity calculation

1.1Regional coordination centres shall carry out the coordinated calculation of cross-zonal capacities.

1.2Coordinated capacity calculation shall be performed for the day-ahead and intraday timeframes.

1.3Coordinated capacity calculation shall be performed on the basis of the methodologies developed pursuant to the guideline on capacity allocation and congestion management adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

1.4Coordinated capacity calculation shall be performed based on a common grid model in accordance with point 3.

1.5Coordinated capacity calculation shall ensure an efficient congestion management in accordance with the principles of congestion management defined in this Regulation.

2.Coordinated security analysis

2.1Regional coordination centres shall carry out a coordinated security analysis aiming to ensure secure system operation.

2.2Security analysis shall be performed for all operational planning timeframes, between the year-ahead and intraday timeframes, using the common grid models.

2.3Coordinated security analysis shall be performed on the basis of the methodologies developed pursuant to the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

2.4Regional coordination centres shall share the results of the coordinated security analysis with at least the transmission system operators in the system operation region.

2.5When as a result of the coordinated security analysis a regional coordination centre detects a possible constraint, it shall design remedial actions maximising effectiveness and economic efficiency.

3.Creation of common grid models

3.1Regional coordination centres shall set up efficient processes for the creation of a common grid model for each operational planning timeframe between the year-ahead and intraday timeframes.

3.2Transmission system operators shall appoint one regional coordination centre to build the Union-wide common grid models.

3.3Common grid models shall be performed in accordance with the methodologies developed pursuant to the system operation guideline and the capacity allocation and congestion management guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009.

3.4Common grid models shall include relevant data for efficient operational planning and capacity calculation in all operational planning timeframes between the year-ahead and intraday timeframes.

3.5Common grid models shall be made available to all regional coordination centres, transmission system operators, ENTSO for Electricity and, upon request, to ACER.

4.Support for transmission system operators' defence and restoration plans with regard to the consistency assessment

4.1Regional coordination centres shall support the transmission system operators in the system operation region in carrying out the consistency assessment of transmission system operators' defence plans and restoration plans pursuant to the procedures set out in the network code on electricity emergency and restoration adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009.

4.2All transmission system operators shall agree on a threshold above which the impact of actions of one or more transmission system operators in the emergency, blackout or restoration states is considered significant for other transmission system operators synchronously or non-synchronously interconnected.

4.3In providing support to the transmission system operators, the regional coordination centre shall:

(a) identify potential incompatibilities;

(b) propose mitigation actions.

4.4Transmission system operators shall assess and take into account the proposed mitigation actions.

5.Support the coordination and optimisation of regional restoration

5.1Each relevant regional coordination centre shall support the transmission system operators appointed as frequency leaders and the resynchronisation leaders pursuant to the network code on emergency and restoration adopted on the basis of Article 6(11) of Regulation (EC) No 714/2009 to improve the efficiency and effectiveness of system restoration. The transmission system operators in the system operation region shall establish the role of the regional coordination centre relating to the support to the coordination and optimisation of regional restoration.

5.2Transmission system operators may request assistance from regional coordination centres if their system is in a blackout or restoration state.

5.3Regional coordination centres shall be equipped with the close to real time supervisory control and data acquisition systems with the observability defined by applying the threshold referred to in point 4.2.

6.Post-operation and post-disturbances analysis and reporting

6.1Regional coordination centres shall investigate and prepare a report on any incident above the threshold referred to in point 4.2. The regulatory authorities in the system operation region and ACER may be involved in the investigation upon their request. The report shall contain recommendations aiming to prevent similar incidents in future.

6.2Regional coordination centres shall publish the report. ACER may issue recommendations aiming to prevent similar incidents in future.

7.Regional sizing of reserve capacity

7.1Regional coordination centres shall calculate the reserve capacity requirements for the system operation region. The determination of reserve capacity requirements shall:

(a) pursue the general objective to maintain operational security in the most cost effective manner;

(b) be performed at the day-ahead or intraday timeframe, or both;

(c) calculate the overall amount of required reserve capacity for the system operation region;

(d) determine minimum reserve capacity requirements for each type of reserve capacity;

(e) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement;

(f) set out the necessary requirements for the geographical distribution of required reserve capacity, if any.

8.Facilitation of the regional procurement of balancing capacity

8.1Regional coordination centres shall support the transmission system operators in the system operation region in determining the amount of balancing capacity that needs to be procured. The determination of the amount of balancing capacity shall:

(a) be performed at the day-ahead or intraday timeframe, or both;

(b) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement;

(c) take into account the volumes of required reserve capacity that are expected to be provided by balancing energy bids, which are not submitted based on a contract for balancing capacity.

8.2Regional coordination centres shall support the transmission system operators of the system operation region in procuring the required amount of balancing capacity determined in accordance with point 8.1. The procurement of balancing capacity shall:

(a) be performed at the day-ahead or intraday timeframe, or both;

(b) take into account possible substitutions between different types of reserve capacity with the aim to minimise the costs of procurement.

9.Week-ahead to at least day-ahead regional system adequacy assessments and preparation of risk reducing actions

9.1Regional coordination centres shall carry out week-ahead to at least day-ahead regional adequacy assessments in accordance with the procedures set out in Regulation (EU) 2017/1485 and on the basis of the methodology developed pursuant Article 8 of Regulation (EU) 2019/941.

9.2Regional coordination centres shall base the short-term regional adequacy assessments on the information provided by the transmission system operators of system operation region with the aim of detecting situations where a lack of adequacy is expected in any of the control areas or at regional level. Regional coordination centres shall take into account possible cross-zonal exchanges and operational security limits in all relevant operational planning timeframes.

9.3When performing a regional system adequacy assessment, each regional coordination centre shall coordinate with other regional coordination centres to:

(a) verify the underlying assumptions and forecasts;

(b) detect possible cross-regional lack of adequacy situations.

9.4Each regional coordination centre shall deliver the results of the regional system adequacy assessments together with the actions it proposes to reduce risks of lack of adequacy to the transmission system operators

in the system operation region and to other regional coordination centres.

10.Regional outage planning coordination

10.1Each Regional coordination centre shall carry out regional outage coordination in accordance with the procedures set out in the system operation guideline adopted on the basis of Article 18(5) of Regulation (EC) No 714/2009 in order to monitor the availability status of the relevant assets and coordinate their availability plans to ensure the operational security of the transmission system, while maximising the capacity of the interconnectors and the transmission systems affecting cross-zonal flows.

10.2Each Regional coordination centre shall maintain a single list of relevant grid elements, power generating modules and demand facilities of the system operation region and make it available on the ENTSO for Electricity operational planning data environment.

10.3Each Regional coordination centre shall carry out the following activities related to outage coordination in the system operation region:

(a) assess outage planning compatibility using all transmission system operators' year-ahead availability plans;

(b) provide the transmission system operators in the system operation region with a list of detected planning incompatibilities and the solutions it proposes to solve the incompatibilities.

11.Optimisation of inter-transmission system operator compensation mechanisms

11.1The transmission system operators in the system operation region may jointly decide to receive support from the regional coordination centre in administering the financial flows related to settlements between transmission system operators involving more than two transmission system operators, such as redispatching costs, congestion income, unintentional deviations or reserve procurement costs.

12.Training and certification of staff working for regional coordination centres

12.1Regional coordination centres shall prepare and carry out training and certification programmes focusing on regional system operation for the personnel working for regional coordination centres.

12.2The training programs shall cover all the relevant components of system operation, where the regional coordination centre performs tasks including scenarios of regional crisis.

13.Identification of regional electricity crisis scenarios

13.1If the ENTSO for Electricity delegates this function, regional coordination centres shall identify regional electricity crisis scenarios in accordance with the criteria set out in Article 6(1) of Regulation (EU) 2019/941.

The identification of regional electricity crisis scenarios shall be performed in accordance with the methodology set out in Article 5 of Regulation (EU) 2019/941.

13.2Regional coordination centres shall support the competent authorities of each system operation region upon their request in the preparation and carrying out of biennial crisis simulation in accordance with Article 12(3) of Regulation (EU) 2019/941.

14.Identification of needs for new transmission capacity, for upgrade of existing transmission capacity or their alternatives

14.1Regional coordination centres shall support transmission system operators in the identification of needs for new transmission capacity, for an upgrade of existing transmission capacity or for their alternatives, to be submitted to the regional groups established pursuant to Regulation (EU) No 347/2013 and to be included in the ten-year network development plan referred to in Article 51 of Directive (EU) 2019/944.

15.Calculation of the maximum entry capacity available for the participation of foreign capacity in capacity mechanisms

15.1Regional coordination centres shall support transmission system operator in calculating the maximum entry capacity available for the participation of foreign capacity in capacity mechanisms taking into account the expected availability of interconnection and the likely concurrence of system stress between the system where the mechanism is applied and the system in which the foreign capacity is located.

15.2The calculation shall be performed in accordance with the methodology set out in point (a) of Article 26(11).

15.3Regional coordination centres shall provide a calculation for each bidding zone border covered by the system operation region.

16.Preparation of seasonal adequacy assessments

16.1If the ENTSO for Electricity delegates this function pursuant to Article 9 of Regulation (EU) 2019/941, regional coordination centres shall carry out regional seasonal adequacy assessments.

16.2The preparation of seasonal adequacy assessments shall be carried out on the basis of the methodology developed pursuant to Article 8 of Regulation (EU) 2019/941.

ANNEX II

REPEALED REGULATION WITH LIST OF THE SUCCESSIVE AMENDMENTS THERETO

Regulation (EU) No 347/2013 of the European Parliament and of the Council of 17 April 2013 on guidelines for trans-European energy infrastructure and repealing Decision No 1364/2006/EC and amending Regulations (EC) No 713/2009, (EC) No 714/2009 and (EC) No 715/2009 (OJ L 115, 25.4.2013, p. 39)	Point (a) of Article 8(3) Point (a) of Article 8(10) Article 11 Article 18(4a) Article 23(3)
Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (OJ L 163, 15.6.2013, p. 1)	Points 5.5 to 5.9 of Annex I

ANNEX III

CORRELATION TABLE

Regulation (EC) No 714/2009	This Regulation
—	Article 1(a)
—	Article 1(b)
Article 1(a)	Article 1(c)
Article 1(b)	Article 1(d)
Article 2(1)	Article 2(1)
Article 2(2)(a)	Article 2(2)
Article 2(2)(b)	Article 2(3)
Article 2(2)(c)	Article 2(4)
Article 2(2)(d)	—
Article 2(2)(e)	—
Article 2(2)(f)	—
Article 2(2)(g)	Article 2 (5)
—	Article 2 (6) to (71)
—	Article 3
—	Article 4
—	Article 5
—	Article 6
—	Article 7
—	Article 8
—	Article 9
—	Article 10
—	Article 11
—	Article 12
—	Article 13
—	Article 14
—	Article 15
Article 16(1) to (3)	Article 16(1) to (4)
—	Article 16(5) to (8)
Article 16(4) to (5)	Article 16(9) to (11)
—	Article 16(12) and (13)
—	Article 17
Article 14(1)	Article 18(1)
—	Article 18(2)
Article 14(2) to (5)	Article 18(3) to (6)
—	Article 18(7) to (11)

—	Article 19(1)
Article 16(6)	Article 19(2) and (3)
—	Article 19(4) and (5)
—	Article 20
—	Article 21
—	Article 22
Article 8(4)	Article 23(1)
—	Article 23(2) to (7)
—	Article 25
—	Article 26
—	Article 27
Article 4	Article 28(1)
—	Article 28(2)
Article 5	Article 29 (1) to (4)
—	Article 29(5)
Article 8(2) (first sentence)	Article 30(1)(a)
Article 8(3)(b)	Article 30(1)(b)
—	Article 30(1)(c)
Article 8(3)(c)	Article 30 (1)(d)
—	Article 30 (1)(e) and (f)
	Article 30(1) (g) and (h)
Article 8 (3)(a)	Article 30(1)(i)
Article 8(3)(d)	Article 30(1)(j)
	Article 30(1)(k)
Article 8(3)(e)	Article 30(1)(l)
	Article 30(1)(m) to (o)
—	Article 30(2) and (3)
Article 8(5)	Article 30(4)
Article 8(9)	Article 30(5)
Article 10	Article 31
Article 9	Article 32
Article 11	Article 33
Article 12	Article 34
—	Article 35
—	Article 36
—	Article 37

—	Article 38
—	Article 39
—	Article 40
	Article 41
—	Article 42
—	Article 43
—	Article 44
—	Article 45
—	Article 46
—	Article 47
Article 8(10)	Article 48
Article 13	Article 49
Article 2(2) (final subparagraph)	Article 49(7)
Article 15	Article 50(1) to (6)
Annex I point 5.10	Article 50(7)
Article 3	Article 51
—	Article 52
—	Article 53
	Article 54
—	Article 55
—	Article 56
—	Article 57
—	Article 58
Article 8(6)	Article 59(1)(a), (b) and (c)
—	Article 59(1)(d) and (e)
	Article 59(2)
Article 6(1)	Article 59(3)
Article 6(2)	Article 59(4)
Article 6(3)	Article 59(5)
—	Article 59(6)
Article 6(4)	Article 59(7)
Article 6(5)	Article 59(8)
Article 6(6)	Article 59(9)
Article 8(1)	Article 59(10)
Article 6(7)	—
Article 6(8)	—

Article 6(9) and (10)	Article 59(11) and (12)
Article 6(11)	Article 59(13) and (14)
Article 6 (12)	Article 59(15)
Article 8(2)	Article 59(15)
—	Article 60(1)
Article 7(1)	Article 60(2)
Article 7(2)	Article 60(3)
Article 7(3)	—
Article 7(4)	—
—	Article 61(1)
—	Article 61(2)
Article 18(1)	Article 61(3)
Article 18(2)	—
Article 18(3)	Article 61(4)
Article 18(4)	—
Article 18(4a)	Article 61(5)
Article 18(5)	Article 61(5) and (6)
Article 19	—
Article 21	Article 62
Article 17	Article 63
—	Article 64
Article 20	Article 65
Article 22	Article 66
Article 23	Article 67
Article 24	—
—	Article 68
—	Article 69
Article 25	Article 70
Article 26	Article 71