



Brussels, **XXX**
[...] (2014) **XXX** draft

COMMISSION REGULATION (EU) No .../..

of **XXX**

establishing a Guideline on Capacity Allocation and Congestion Management

(Text with EEA relevance)

COMMISSION REGULATION (EU) No .../..

of **XXX**

establishing a Guideline on Capacity Allocation and Congestion Management

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003¹ and in particular Article 18(3)(b) and (5),

Whereas:

- (1) The urgent completion of a fully functioning and interconnected internal energy market is crucial to the objective of maintaining security of energy supply, increasing competitiveness and ensuring that all consumers can purchase energy at affordable prices. A well-functioning internal market in electricity should provide producers with appropriate incentives for investing in new power generation, including in electricity from renewable energy sources, paying special attention to the most isolated Member States and regions in the Union's energy market. A well-functioning market should also provide consumers with adequate measures to promote more efficient use of energy, which presupposes a secure supply of energy.
- (2) Security of energy supply is an essential element of public security and is therefore inherently connected to the efficient functioning of the internal market in electricity and the integration of the isolated electricity markets of Member States. Electricity can reach the citizens of the Union only through the network. Functioning electricity markets and, in particular, the networks and other assets associated with electricity supply are essential to public security, to economic competitiveness and to the well-being of the citizens of the Union.
- (3) Regulation (EC) No 714/2009 sets out non-discriminatory rules for access conditions to the network for cross-border exchanges in electricity and, in particular, rules on capacity allocation and congestion management for interconnections and transmission systems affecting cross-border electricity flows. In order to move towards a genuinely integrated electricity market, the current rules on capacity allocation, congestion management and trade in electricity should be further harmonised. This Regulation therefore sets out minimum harmonised rules for ultimately Union-wide market coupling, in order to provide a clear legal framework for an efficient and modern capacity allocation and congestion management system, facilitating Union-wide trade in electricity, allowing more efficient use of the network and increasing competition, for the benefit of consumers.
- (4) To implement market coupling, the available cross-border capacity needs to be calculated jointly by the Transmission System Operators (hereinafter "TSOs"). For this

¹ OJ L 211, 14.08.2009, p. 15.

purpose, they should establish a common grid model including estimates on generation, load and network status for each hour. The available capacity should normally be calculated according to the so-called flow-based calculation method, a method that takes into account that electricity can flow via different paths and optimises the available capacity in highly interdependent grids. The available cross-border capacity should be one key input into the further calculation process, in which all Union bids and offers, collected by power exchanges, are matched, taking into account available cross-border capacity in an economically optimal manner. Market coupling ensures that power usually flows from low- price to high- price areas.

- (5) The market coupling operator (hereinafter "MCO") uses a specific algorithm to match bids and offers in an optimal manner. The results of the calculation should be made available to all power exchanges on a non-discriminatory basis. Based on the results of the calculation by the MCO, the power exchanges should inform their clients of the successful bids and offers. The energy should then be transferred across the network according to the results of the MCO's calculation. The process for day-ahead and intraday market coupling is similar, with the exception that in the intraday coupling, it should use a continuous process of auctions throughout the day and not one single calculation as in day-ahead coupling.
- (6) Capacity calculation for the day-ahead and intraday market timeframes should be coordinated at least at regional level to ensure that capacity calculation is reliable and that optimal capacity is made available to the market. Common regional capacity calculation methodologies should be established to define inputs, calculation approach and validation requirements. Information on available capacity should be updated in a timely manner based on latest information through an efficient capacity calculation process.
- (7) There are two permissible approaches when calculating cross-zonal capacity: flow-based or based on coordinated net transmission capacity. The flow-based approach should be used as a default approach for day-ahead and intraday capacity calculation where cross-zonal capacity between bidding zones is highly interdependent. The flow-based approach should only be introduced after market participants have been consulted and given sufficient preparation time to allow for a smooth transition. The coordinated net transmission capacity approach should only be applied in regions where cross-zonal capacity is less interdependent and it can be shown that the flow-based approach should not bring added value.
- (8) A common grid model for market coupling purposes representing the European interconnected system should be established to calculate cross-zonal capacity in a coordinated way. The common grid model should include a model of the transmission system with the location of generation units and loads relevant to calculating cross-zonal capacity. The provision of accurate and timely information by each TSO is essential to the creation of the common grid model.
- (9) Each TSO should be required to prepare an individual grid model of its system and send it to TSOs responsible for merging them into a common grid model. The individual grid models should include information from generation and load units.
- (10) TSOs should use a common set of remedial actions such as countertrading or redispatching to deal with both internal and cross-zonal congestion. In order to facilitate more efficient capacity allocation and to avoid unnecessary curtailments of cross-border capacities, TSOs should coordinate the use of remedial actions in capacity calculation.

- (11) Bidding zones reflecting supply and demand distribution are a cornerstone of market-based electricity trading. Bidding zones therefore should be defined in a manner to ensure efficient congestion management and overall market efficiency. Bidding zones can be subsequently modified by splitting, merging or adjusting the zone borders. The bidding zones should be identical for all market timeframes.
- (12) TSOs should implement coordinated redispatching of cross-border relevance or countertrading at regional level or above regional level. Redispatching of cross-border relevance or countertrading should be coordinated with redispatching or countertrading internal to the responsibility area.
- (13) Capacity should be allocated in the day-ahead and intraday market timeframes using implicit allocation methods, in particular methods which allocate electricity and capacity together. In the case of single day-ahead coupling, this method should be implicit auction and in the case of single intraday coupling it should be continuous implicit allocation. The method of implicit auction should rely on effective and timely interfaces between TSOs, power exchanges and a series of other parties to ensure capacity is allocated and congestion managed in an efficient manner.
- (14) For efficiency reasons, single day-ahead coupling and single intraday coupling should make use of existing market operators where appropriate, without precluding competition from new operators.
- (15) The Commission, in cooperation with the Agency for the Cooperation of Energy Regulators (hereinafter the "Agency") may create or appoint a single regulated entity to perform some common MCO functions relating to the market operation of single day-ahead and single intraday coupling.
- (16) The development of more liquid intraday markets which give parties the ability to balance their positions closer to real time should help to integrate renewable energy sources into the Union electricity market and thus, in turn, facilitate renewable energy policy objectives.
- (17) Day-ahead and intraday cross-zonal capacity should be firm to allow effective cross-border allocation.
- (18) In order for the implicit auctions to take place Union-wide, it is necessary to ensure Union-wide price coupling process. This process should respect transmission capacity and allocation constraints and should be designed in a manner that allows for its application or extension across the entire Union and for the development of future new product types.
- (19) Power exchanges collect bids and offers within different timeframes which serve as a necessary input for capacity calculation in the market coupling process. Hence, the rules for the trading of electricity provided for in this Regulation require an institutional framework for power exchanges. Common requirements for the designation of nominated electricity market operators ("NEMOs") and for their tasks should facilitate the achievement of the aims of Regulation (EC) No 714/2009/EC and allow market coupling to take due account of the internal market.
- (20) Establishing a Union-wide price coupling process requires cooperation between potentially competing power exchanges in order to establish common market coupling functions. That is why oversight and compliance with competition rules is of utmost importance regarding these common functions.

- (21) Despite the creation of a reliable algorithm to match bids and offers and appropriate back-up processes, there may be situations where the price coupling process is unable to produce results. Consequently, it is necessary to provide for fallback solutions at a national and regional level to ensure capacity can still be allocated.
- (22) A reliable pricing of transmission capacity should be introduced for the intraday market timeframe, reflecting congestion if capacity is scarce.
- (23) Any costs incurred efficiently to guarantee firmness of capacity and to set up processes to comply with this Regulation should be recovered via network tariffs or appropriate mechanisms in a timely manner. Nominated electricity market operators (hereinafter NEMOs) and MCOs should be entitled to recover their incurred costs if they are efficiently incurred, reasonable and proportionate.
- (24) Rules for sharing the common costs of single day-ahead coupling and single intraday coupling between NEMOs and TSOs from different Member States should be agreed before the implementation process starts in order to avoid delays and disputes due to cost sharing.
- (25) The cooperation between TSOs, NEMOs and regulatory authorities is necessary in order to promote the completion and efficient functioning of the internal market in electricity and to ensure the optimal management, coordinated operation and sound technical development of the electricity transmission system in the Union. TSOs, NEMOs and regulatory authorities should exploit synergies arising from capacity allocation and congestion management projects contributing to the development of the internal market in electricity. They should draw on the experience gained, respect the decisions made, and use solutions developed as part of those projects.
- (26) In order to ensure the close cooperation among TSOs, NEMOs and regulatory authorities a robust, reliable and non-discriminatory Union governance framework for single day-ahead market coupling and for single intraday coupling should be established.
- (27) The objective of this Regulation, namely the establishment of Union-wide market coupling, cannot be successfully achieved without a certain set of harmonised rules for capacity calculation, congestion management and trading of electricity.
- (28) However, single day ahead and intraday market coupling should only be implemented stepwise, as the regulatory framework for electricity trade and the physical structure of the transmission grid are characterised by significant differences between Member States and regions. The Union-wide introduction of market coupling therefore requires a successive alignment of the existing methodologies on capacity calculation, allocation and congestion management. Single intraday and day-ahead market coupling may therefore be introduced at a regional level as an intermediate step where necessary.
- (29) Given the exceptionally high degree of complexity and detail of the terms and conditions or methodologies needed to fully apply market coupling, certain detailed terms and conditions or methodologies should be developed by TSOs and NEMOs and approved by the national regulatory authorities (hereinafter "NRA"). However the development of certain terms and conditions or methodologies by TSOs and power exchanges and their subsequent approval by regulatory authorities must not delay the completion of the internal electricity market. Thus, it is necessary to include specific provisions on cooperation between TSOs, NEMOs and NRAs.

- (30) In line with Article 18 of Regulation (EC) 714/2009 and Article 8 of Regulation (EC) 713/2009 of the European Parliament and of the Council², the the Agency should take a decision if the competent national regulatory authorities are not able to reach an agreement on common terms and conditions or methodologies.
- (31) This Regulation supplements Annex I of Regulation (EC) No 714/2009, in accordance with the principles set out in Article 16 of that Regulation.
- (32) Due to the significant differences in the current market design of Ireland and Northern Ireland, additional time for the implementation of market coupling in these regions should be provided.
- (33) The measures provided for in this Regulation are in accordance with the opinion of the Committee referred to in Article 23(1) of Regulation (EC) No 714/2009.

² Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators (OJ L 211, 14.8.2009, p. 1).

HAS ADOPTED THIS REGULATION:

Title I

General provisions

Article 1

Subject matter and scope

1. This Regulation lays down 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.
2. This Regulation shall apply to all transmission systems and interconnections in the Union except the transmission systems on islands which are not connected with other transmission systems via interconnections.
3. In Member States where more than one transmission system operator exists, this Regulation shall apply to all transmission system operators within that Member State. Where a transmission system operator does not have a function relevant to one or more obligations under this Regulation, Member States may provide that the responsibility for complying with those obligations is assigned to one or more different, specific transmission system operators.
4. The Union single day-ahead coupling and intraday coupling may be opened to market operators and TSOs operating in third countries on the condition that the national law in that third country implements the main provisions of Union electricity market legislation and that there is an intergovernmental agreement on electricity cooperation between the Union and that third country.
5. Participation by third countries in day-ahead coupling and single intraday coupling shall be decided by the Commission based on an opinion given by the Agency. The rights and responsibilities of third country NEMOs and TSOs joining single day-ahead coupling shall be consistent with the rights and responsibilities of NEMOs and TSOs operating in the Union to allow a smooth functioning of the single day-ahead and single intraday coupling systems implemented at Union level and a level-playing field for all stakeholders.

Article 2
Definitions

For the purposes of this Regulation, the definitions in Article 2 of Regulation (EC) No 714/2009, Article 2 of Commission Regulation (EU) No 543/2013³ and Article 2 of Directive 2009/72/EC shall apply.

In addition, the following definitions shall apply:

1. 'responsibility area' means a coherent part of the interconnected transmission system, including interconnectors, operated by a single TSO with connected demand facilities, or power generating modules, if any.
2. 'individual grid model' means a data set describing power system characteristics (generation, load and grid topology) and related rules to change these characteristics during capacity calculation prepared by the responsible TSOs, to be merged with other individual grid model components in order to create the common grid model;
3. 'common grid model' means a Union-wide data set agreed between various TSOs describing main power system characteristics (generation, loads and grid topology) and rules for changing these characteristics during the capacity calculation process;
4. 'capacity calculation region' means the geographic area in which coordinated capacity calculation is applied;
5. 'scenario' means the forecasted status of the power system for a given timeframe;
6. 'net position' means the netted sum of electricity exports and imports for each market time unit for a bidding zone;
7. 'allocation constraints' means the constraints to be respected during capacity allocation to maintain the transmission system within operational security limits and have not been translated into cross-zonal capacity or that are needed to increase the efficiency of capacity allocation;
8. 'operational security limits' means the acceptable operating boundaries for secure grid operation such as thermal limits, voltage limits, short-circuit current limits, frequency and dynamic stability limits;
9. 'coordinated net transmission capacity approach' means the capacity calculation method based on the principle of assessing and defining ex ante a maximum energy exchange between adjacent bidding zones;
10. 'flow-based approach' means a capacity calculation method optimising the calculation of available capacity taking into account that electricity can flow via different paths in highly interdependent grids;
11. 'contingency' means the identified and possible or already occurred fault of an element, including not only the transmission system elements, but also significant grid users and distribution network elements if relevant for the transmission system operational security;
12. 'coordinated capacity calculator' means the entity with the task of calculating cross-zonal capacity, at regional level or above and of managing the validation process of the capacity calculation;

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).

13. 'generation shift key' means a method of translating a net position change of a given bidding zone into estimated specific injection increases or decreases in the common grid model;
14. 'remedial security action' means any measure applied by a TSO in order to maintain operational security;
15. 'remedial security action with costs' means a remedial security action with direct payments made to procure the service which may include but is not limited to countertrading and redispatching;
16. 'remedial security action without costs' means a remedial security action not involving payments by a TSO to generation units or loads;
17. 'reliability margin' means the necessary margin in the calculation related to critical network elements or cross-zonal capacity which is required to cover uncertainties of power flows in the period between the capacity calculation and real time;
18. 'market time' means central European summer time or central European time, whichever is in effect;
19. 'congestion income' means the revenues received as a result of capacity allocation;
20. 'market congestion' means a situation in which the economic surplus for single day-ahead or intraday coupling has been limited by cross-zonal capacity or other active allocation constraints;
21. 'physical congestion' means any network situation, either identified in a common grid model, or occurring in real time, where power flows have to be modified to respect operational security;
22. 'structural congestion' means congestion in the transmission system that can be unambiguously defined, is predictable, is geographically stable over time and is frequently reoccurring under normal power system conditions;
23. 'matching' means the trading mode through which sell orders are assigned to appropriate buy orders to ensure the maximisation of economic surplus for single day-ahead or intraday coupling;
24. 'order' means an intention to purchase or sell energy or capacity expressed by a market participant subject to specified execution conditions;
25. 'matched orders' means all matched, buy and sell, orders within a trade made by the price coupling algorithm or the continuous trade matching algorithm;
26. 'nominated electricity market operator (NEMO)' means a market operator designated by the competent authority to participate in single day-ahead or single intraday coupling;
27. 'shared order book' means a module in the continuous intraday coupling system collecting all matchable orders from the NEMOs participating in single intraday coupling and performing continuous matching of those orders;
28. 'trade' means one or more matched orders;
29. 'single day-ahead coupling' means a coordinated electricity price setting and cross-zonal capacity allocation mechanism, which simultaneously matches orders from the day-ahead markets per bidding zone, respecting cross-zonal capacity and allocation constraints between bidding zones;

30. 'single intraday coupling' means an implicit cross-zonal capacity allocation mechanism which collects orders for each bidding zone from wholesale market participants and matches them continuously into contracts to deliver electricity while respecting cross-zonal capacity and allocation constraints, and is available in the intraday market timeframe once the day-ahead market allocation process has taken place;
31. 'price coupling algorithm' means the algorithm used in single day-ahead coupling for matching orders;
32. 'continuous trading matching algorithm' means the algorithm used in continuous intraday coupling for matching orders;
33. 'market coupling operator (MCO) function' means the task of matching orders for all bidding zones in single day-ahead and intraday coupling, taking into account allocation constraints and cross-zonal capacity and thereby implicitly allocating capacity;
34. 'market operator' means the entity with the task of operating or planning to operate a day-ahead market or a continuous intraday market;
35. 'clearing price' means the price determined by matching the highest accepted selling order and the lowest accepted buying order in the electricity market;
36. 'scheduled exchange' means an electricity transfer scheduled between geographic areas, for each market time unit and for a given direction;
37. 'scheduled exchange calculator' means the entity with the task of calculating scheduled exchanges;
38. 'day-ahead market timeframe' means the timeframe of the electricity market until the day-ahead market gate closure time, where, for each market time unit, products are traded the day prior to delivery;
39. 'day-ahead firmness deadline' means the point in time after which cross-zonal capacity becomes firm;
40. 'day-ahead market gate closure time' means the point in time until which orders are accepted in the day-ahead market;
41. 'intraday market timeframe' means the timeframe of the electricity market between intraday cross-zonal gate opening time and intraday cross-zonal gate closure time, where commercial electricity transactions are executed prior to the delivery of traded products after day-ahead market gate closure time;
42. 'intraday cross-zonal gate opening time' means the point in time when cross-zonal capacity between bidding zones is released for a given market time unit and a given bidding zone border;
43. 'intraday cross-zonal gate closure time' means the point in time where cross-zonal capacity allocation is no longer permitted for a given market time unit;
44. 'capacity management module' means a module for the intraday capacity calculation system containing up-to-date information on available cross-zonal capacity for the purpose of allocating cross-zonal capacity;
45. 'standard intraday product' means a product for continuous intraday coupling for constant energy delivery and for a period not exceeding one hour;

46. 'non-standard intraday product' means a product for continuous intraday coupling not for constant energy delivery or for a period exceeding one hour with specific characteristics designed to reflect system operation practices or market needs, for example orders covering multiple market time units or products reflecting production unit startup costs;
47. 'central counter party' means the entity with the task of entering into contracts with market participants, by novation of the contracts resulting from the matching process, and of organising the transfer of net positions resulting from capacity allocation with other central counter parties or shipping agents;
48. 'shipping agent' means the entity with the task of transferring net positions between different central counter parties;
49. 'firmness' means a guarantee that cross-zonal capacity rights will in principle remain unchanged and that a compensation is paid if they are nevertheless changed;
50. 'force majeure' means any unforeseeable or unusual event or situation beyond the reasonable control of a TSO, and not due to a fault of the TSO, which cannot be avoided or overcome with reasonable foresight and diligence, which cannot be solved by measures which are from a technical, financial or economic point of view reasonably possible for the TSO, which has actually happened and is objectively verifiable, and which makes it impossible for the TSO to fulfil, temporarily or permanently, its obligations in accordance with this Regulation;
51. 'economic surplus for the single day-ahead or intraday coupling' means the sum of (i) the supplier surplus for the single day-ahead or intraday coupling for the relevant time period, (ii) the consumer surplus for the single day-ahead or intraday coupling, (iii) the congestion income and (iv) other related costs and benefits where these increase economic efficiency for the relevant time period, supplier and consumer surplus being the difference between the accepted orders and the clearing price per energy unit multiplied by the volume of energy of the orders;

Article 3

Objectives of capacity allocation and congestion management cooperation

1. This Regulation aims at:
 - (a) promoting effective competition in the generation, trading and supply of electricity;
 - (b) ensuring optimal use of the transmission infrastructure;
 - (c) ensuring operational security;
 - (d) optimising the calculation and allocation of cross-zonal capacity;
 - (e) ensuring non-discriminatory treatment of TSOs, NEMOs, the Agency, regulatory authorities and market participants;
 - (f) ensuring and enhancing the transparency and reliability of information;
 - (g) contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union;
 - (h) respecting the need for a fair and orderly market and fair and orderly price formation;

- (i) creating a level playing field for NEMOs;
- (j) providing non-discriminatory access to cross-zonal capacity.

Article 4

NEMOs designation and revocation of the designation

1. Each Member State electrically connected to a bidding zone in another Member State shall ensure that one or more NEMOs are designated by [*two months after the entry into force of this Regulation*] to perform the single day-ahead and / or intra-day coupling. For that purpose, domestic and non-domestic market operators may be invited to apply to be designated as a NEMO.
2. Each Member State concerned shall ensure that at least one NEMO is designated in each bidding zone on its territory. NEMOs shall be designated for an initial term of four years.
3. The entity that designates NEMOs shall assess whether candidates meet the criteria set out in Article 6. Those criteria shall apply regardless of whether one or more NEMOs are appointed. When deciding upon NEMO designations, any discrimination between applicants, notably between non-domestic and domestic applicants, shall be avoided. If a national ministry or another national authority is competent to designate NEMOs, the regulatory authority shall give an opinion on the extent to which the applicant for designation meets the designation criteria laid down in Article 6.
4. A NEMO designated in one Member State shall have the right to offer day-ahead and intraday trading services with delivery in another Member State. The trading rules in the latter Member State shall apply without the need for designation as a NEMO in that Member State.

By way of exception, the Member State where delivery takes place may refuse these trading services by a NEMO designated in another Member State if it can establish that its own trading rules are not compatible with cross-border trading services. In such cases, the Member State shall notify its decision to refuse cross-border trading services to the NEMO and to the regulatory authorities of the Member State where the NEMO is designated, as well as to the Agency and the Commission. The refusal shall be duly justified and shall in particular set out how and by when the domestic trading rules can be made compatible with cross-border trading services. The regulatory authority of the Member State refusing the trading services shall investigate the decision and publish an opinion on how to make the trading services and the trading rules compatible.

5. Regulatory authorities shall monitor the compliance of designated NEMOs with the designation criteria set out in Article 6. If a NEMO fails to maintain compliance with the criteria laid down in Article 6, the regulatory authority shall notify the relevant failures to the NEMO. A Member State shall ensure that designation is revoked if the NEMO fails to maintain compliance with the criteria and is not able to restore compliance within six months of being notified by the regulatory authority of such failure.
6. The Member States shall inform the Agency of the designation and revocation of NEMOs. The Agency shall maintain a list of designated NEMOs on its website.

Article 5

NEMOs designation in case of a national legal monopoly for trading services

1. If a national legal monopoly for day-ahead and intraday trading services already exists in a Member State at the time of the entry into force of this Regulation, the Member State concerned may refuse the designation of more than one NEMO per bidding zone. If there are several applicants to be designated as the only NEMO, the Member State concerned shall designate the applicant which best meets the criteria listed in Article 6. If a Member State refuses the designation of more than one NEMO per bidding zone, the competent regulatory authority shall fix or approve the fees for trading in the day-ahead and intraday markets, sufficiently in advance of their entry into force, or specify the methodologies used to calculate them.

In accordance with Article 4(4), the Member State concerned may also refuse cross-border trading services offered by a NEMO designated in another Member State; however, the protection of existing power exchanges in that Member State from economic disadvantages through competition is not a valid reason for refusal.

2. [Two years after the entry into force of this Regulation], the Commission shall forward a report to the European Parliament and the Council in accordance with Article 24 of Regulation (EC) No 714/2009 on the development of single day-ahead and intraday coupling in the Member States, with particular emphasis on the development of competition between NEMOs. On the basis of that report, and if the Commission deems that there is no justification for the continuation of national legal monopolies, the Commission may consider appropriate legislative or other appropriate measures to further increase competition and trade between and within Member States.

Article 6

NEMO designation criteria

1. An applicant shall only be designated as a NEMO if it complies with all of the following requirements:
 - (a) it has or contracts adequate resources for common, coordinated and compliant operation of single day-ahead coupling and/or single intraday coupling, including the resources necessary to fulfil the NEMO functions, financial resources, the necessary information technology, technical infrastructure and operational procedures or it shall provide proof that it is able to make these resources available within a reasonable preparatory period before taking up its tasks in accordance with Article 7;
 - (b) it shall be able to ensure that market participants have open access to information regarding the NEMO tasks in accordance with Article 7;
 - (c) it shall be cost-efficient with respect to single day-ahead and intraday coupling;
 - (d) it shall be independent from other market participants;
 - (e) it shall be able to treat all market participants in a non-discriminatory way;
 - (f) it shall be subject to market surveillance;

- (g) it shall have in place appropriate transparency and confidentiality agreements with market participants and the TSOs;
 - (h) it shall be able to provide the necessary clearing services.
2. The designation criteria set out in paragraph 1 shall be applied in such a way that competition between NEMOs is organised in a fair and non-discriminatory manner.

Article 7
NEMO tasks

1. NEMOs shall act as market operators in national or regional markets. Their tasks shall include receiving orders from market participants, having overall responsibility for matching and allocating orders in accordance with the single day-ahead coupling and single intraday coupling results, publishing prices and settling and clearing the contracts resulting from the trades according to relevant participant agreements and regulations.

With regard to single day-ahead coupling and single intra-day coupling, NEMOs shall in particular carry out the following tasks:

- (a) implementing functions set out in paragraph 2 in coordination with other NEMOs the MCO;
- (b) establishing collectively the requirements for the single day-ahead coupling and single intraday coupling, requirements for MCO functions and the price coupling algorithm with respect to all matters related to electricity market functioning in accordance with paragraph 2 of this Article, and Articles 35 and 36;
- (c) fixing maximum and minimum prices in accordance with Articles 40 and 52;
- (d) making anonymous and sharing the received order information necessary to perform the MCO functions provided for in paragraph 2 of this Article and Articles 39 and 51;
- (e) assessing the results calculated by the MCO functions set out in paragraph 2 of this Article allocating the orders based on these results, validating the results as final if they are considered correct and taking responsibility for them in accordance with Articles 46 and 57;
- (f) informing the market participants on the results of their orders in accordance with Articles 46 and 57;
- (g) acting as central counter parties for clearing and settlement of the exchange of energy resulting from single day-ahead and intraday coupling in accordance with Article 65(3);
- (h) establishing jointly back-up procedures for national or regional market operation in accordance with Article 35(3) if no results are available from the MCO functions in accordance with Article 38(2);
- (i) jointly providing single day-ahead coupling and single intraday coupling cost forecasts and cost information to competent regulatory authorities and TSOs where NEMO costs for implementing and carrying out MCO functions are to be covered by the concerned TSOs' contribution in accordance with Articles 72 to 74 and Article 77.

2. NEMOs shall carry out MCO functions jointly with other NEMOs. Those functions shall include the following:
 - (a) developing and maintaining the algorithms, systems and procedures for single day-ahead coupling and for single intraday coupling in accordance with Articles 35 and 49;
 - (b) processing input data on cross-zonal capacity and allocation constraints provided by coordinated capacity calculators in accordance with Articles 44 and 55;
 - (c) operating the single day-ahead coupling and the single intraday coupling algorithm in accordance with Articles 46 and 57;
 - (d) validating and sending single day-ahead coupling and single intraday coupling results to the NEMOs in accordance with Articles 46 and 57.
3. By [*six months after the entry into force of this Regulation*] all NEMOs shall submit to all regulatory authorities and the Agency a plan that sets out how to jointly set up and perform the MCO functions set out in paragraph 2, including necessary draft agreements between NEMOs and with third parties. The plan shall include a detailed description and the proposed timescale for implementation, which shall not be longer than 12 months, and a description of the expected impact of the terms and conditions or methodologies on the establishment and performance of the MCO functions.
4. Cooperation between NEMOs shall be strictly limited to what is necessary to jointly perform the MCO functions in an efficient and effective manner. The joint performance of MCO functions shall be based on the principle of non-discrimination and ensure that no NEMO can benefit from unjustified economic advantages through participation in MCO functions.
5. The Agency shall monitor NEMOs' progress in establishing and performing the MCO functions, in particular regarding the contractual and regulatory framework and regarding technical preparedness to fulfil the MCO functions. By [*nine months after entry into force of this Regulation*], the Agency shall report to the Commission whether progress in establishing and implementing single day-ahead coupling or intraday coupling is satisfactory

The Agency may assess the effectiveness and efficiency of establishment and implementation of the MCO function at any time. If that assessment demonstrates that the requirements are not fulfilled, the Agency may recommend to the Commission any further measures needed for timely effective and efficient delivery of single day-ahead coupling and intraday coupling.
6. If NEMOs fail to submit a plan to establish the MCO functions referred to in paragraph 2 of this Article for either the intraday or the day-ahead market timeframes, the Commission may, in accordance with Article 9(3), propose an amendment to this Regulation, considering in particular appointing the ENTSO for Electricity or another entity to carry the MCO functions for single day-ahead coupling or for intraday coupling instead of the NEMOs.

Article 8
TSOs' tasks related to single day ahead and intraday coupling

1. In Member States electrically connected to another Member State all TSOs shall participate in the single day-ahead coupling and the single intra-day coupling.
2. TSOs shall
 - (a) jointly establish TSO requirements for the price coupling and continuous trading matching algorithms for all aspects related to capacity allocation in accordance with Article 36(1)(a);
 - (b) jointly validate the matching algorithms against the requirements referred to in point (a) of this paragraph in accordance with Article 36(4);
 - (c) establish and perform capacity calculation in accordance with Articles 13 to 29;
 - (d) jointly define and send cross zonal capacities and allocation constraints in accordance with Articles 44 and 55;
 - (e) verify single day-ahead coupling results in terms of capacity constraints in accordance with Articles 46(2) and 50;
 - (f) where required, establish scheduled exchange calculators for calculating and publishing commercial cross-zonal exchanges on borders between bidding zones in accordance with Articles 47 and 54;
 - (g) respect the results from single day-ahead coupling and single intra-day coupling calculated in accordance with Article 38 and Article 50;
 - (h) establish and operate fall-back procedures as appropriate for capacity allocation in accordance with Articles 43;
 - (i) propose the intraday cross-zonal gate opening and intraday cross-zonal gate closure times in accordance with Article 56;
 - (j) share congestion income in accordance with the methodology jointly developed in accordance with Article 70;
 - (k) where so agreed, act as shipping agents transferring net positions in accordance with Article 65(6);

Article 9
Adoption of terms and conditions or methodologies

1. TSOs and NEMOs shall develop the terms and conditions or methodologies within the respective deadline set out in this Regulation. Where a proposal for terms and conditions or methodologies pursuant to this Regulation needs to be developed and agreed by more than one TSO or NEMO, the participating TSOs and NEMOs shall closely cooperate. TSOs, with the assistance of ENTSO for Electricity, and all NEMOs shall regularly inform the competent regulatory authorities and the Agency about the progress of developing these terms and conditions or methodologies.
2. TSOs and NEMOs deciding on proposals for terms and conditions or methodologies in accordance with Articles 7, 14(1), 15(1), 16(1), 19(1), 21, 23(1), 26, 31(1)(c),

34(1) and (3), 36, 53(3) and 70 shall decide based on a two-thirds majority if no consensus could be reached among them.

3. If TSOs or NEMOs fail to submit a proposal for terms and conditions or methodologies within the time-limit, they shall provide the Agency with the relevant drafts of the terms and conditions or methodologies, and explain what has prevented an agreement. The Agency shall inform the Commission and shall, in cooperation with the competent regulatory authorities, at the Commission's request, investigate the reasons for the failure and inform the Commission thereof. The Commission shall take the appropriate steps to make possible the adoption of the required terms and conditions or methodologies within four months from the receipt of the Agency's information.
4. Each regulatory authority shall approve the terms and conditions or methodologies used to calculate or set out the single day-ahead and intraday coupling developed by TSOs and NEMOs. They shall be responsible for approving the terms and conditions or methodologies referred to in paragraphs 5, 6 and 7.
5. The following terms and conditions or methodologies shall be subject to the approval by all regulatory authorities or, in the cases mentioned in Article 8(1) (a) and (b) of Regulation (EC) No 713/2009, by the Agency in accordance with the said provision of Article 8(1):
 - (a) the capacity calculation regions in accordance with Article 14;
 - (b) the generation and load data provision methodology in accordance with Article 15;
 - (c) the common grid model methodology in accordance with Article 16;
 - (d) back-up methodology in accordance with Article 35(3);
 - (e) the maximum and minimum prices in accordance with Articles 40 and 52;
 - (f) the algorithm submitted by NEMOs in accordance with Article 36(3), including the TSOs' and NEMOs' sets of requirements for algorithm development in accordance with Article 36(1);
 - (g) products that can be taken into account by NEMOs in the single day-ahead and intraday coupling process in accordance with Articles 39 and 51;
 - (h) the common methodologies for the calculation of scheduled exchanges in accordance with Articles 42 and 54;
 - (i) the intraday capacity pricing methodology to be developed in accordance with Article 53;
 - (j) the day-ahead firmness deadline in accordance with Article 66;
 - (k) the congestion income distribution methodology in accordance with Article 70;
 - (l) the plan on joint performance of MCO functions in accordance with Article 7(3).
6. The following terms and conditions or methodologies shall be subject to approval by all regulatory authorities of the concerned capacity calculation region:
 - (a) the common capacity calculation methodology in accordance with Article 19(1);

- (b) decisions on the postponement of the introduction of flow-base capacity calculation in accordance with Article 19(3), (4) and (6);
 - (c) the methodology for coordinated redispatching and countertrading in accordance with Article 34; and
 - (d) the redispatching or countertrading cost sharing methodology in accordance with Article 71.
7. The following terms and conditions or methodologies shall be subject to individual approval by each regulatory authority of the Member States concerned:
- (a) where applicable, NEMO designation in accordance with Article 4(2);
 - (b) if applicable, the fees or the methodologies used to calculate the fees of NEMOs relating to trading in the day-ahead and intraday markets in accordance with Article 5(1)(a);
 - (c) proposals of individual TSOs for a review of the bidding zone configuration in accordance with Article 31(1)(d);
 - (d) fallback procedures in accordance with Article 43;
 - (e) complementary regional auctions in accordance with Article 60;
 - (f) removal of explicit auctions in accordance with Article 62;
 - (g) shipping agent arrangements in accordance with Article 65(6);
 - (h) capacity allocation and congestion management costs in accordance with Articles 72 to 76;
 - (i) recovery of the regional and national costs of single day-ahead and intraday coupling in accordance with Article 77(4).
8. The proposal for terms and conditions or methodologies shall include a proposed timescale for their application and a description of their expected impact on the objectives of this Regulation. Proposals on terms and conditions or methodologies subject to the approval by several or all regulatory authorities shall be submitted to the Agency at the same time that they are submitted to regulatory authorities. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within three months on the proposals for terms and conditions or methodologies. If no such request is made, the Agency may issue an opinion on its own initiative within three months following the submission of the proposals.
9. The competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order to find the necessary common position required for the approval of terms and conditions or methodologies in accordance with paragraphs 5 and 6. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 5, 6 and 7, within six months following the opinion of the Agency.
10. Where the regulatory authorities have not been able to reach agreement within the period referred to in paragraph 9, or upon their joint request, the Agency shall adopt a decision concerning the submitted proposals for terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 713/2009.

11. In the event that one or several regulatory authorities request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 5, 6 and 7, the relevant TSOs or NEMOs shall submit a proposal for amended terms and conditions or methodologies for approval within two months following the requirement from the regulatory authorities. The competent regulatory authorities shall decide on the amended terms and conditions or methodologies within two months following their submission. Where the competent regulatory authorities have not been able to reach an agreement within the two-month deadline, or upon their joint request, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within six months, in accordance with Article 8(1) of Regulation (EC) No 713/2009. If the relevant TSOs or NEMOs fail to submit a proposal for amended terms and conditions or methodologies, the procedure provided for in paragraph 3 of this Article shall apply.
12. TSOs or NEMOs responsible for developing a proposal for terms and conditions or methodologies in accordance with paragraph 2 may propose an amendment of these terms and conditions or methodologies.

The proposals for amendment to the terms and conditions or methodologies shall be submitted to consultation in accordance with the procedure set out in Article 10 and approved in accordance with the procedure set out in this Article.

Article 10 Consultation

1. TSOs and NEMOs responsible for submitting proposals for terms and conditions or methodologies in accordance with this Regulation shall consult stakeholders on the draft proposals for terms and conditions or methodologies. The consultation shall last for a period of not less than one month.
2. The proposals for terms and conditions or methodologies submitted by the TSOs and NEMOs at Union level shall be published and submitted to consultation at Union level. Proposals submitted by the TSOs and NEMOs at regional level shall be submitted to consultation at least at regional level. Parties submitting proposals at bilateral or at multilateral level shall consult at least the Member States concerned.
3. The entities responsible for the proposal for terms and conditions or methodologies shall duly consider the views of stakeholders resulting from the consultations undertaken in accordance with paragraph 1, prior to its submission for regulatory approval if required in accordance with Article 9 or prior to publication in all other cases. In all cases, a clear and robust justification for including or not the views resulting from the consultation shall be developed in the submission and published in a timely manner before or simultaneously with the publication of the proposal for terms and conditions or methodologies.

Article 11 Publication of information regarding capacity allocation and congestion management methods

1. TSOs and NEMOs responsible for establishing the following terms and conditions or methodologies shall publish them on the internet after approval by the competent regulatory authorities or, if no such approval is required, after their establishment,

except where such information is considered as confidential in accordance with Article 12:

- (a) the functional requirements of the algorithms developed in accordance with Article 36;
 - (b) information on the parameters used for capacity calculation in accordance with Article 28;
 - (c) shipping agent arrangements in accordance with Article 65(6);
 - (d) congestion income distribution arrangements in accordance with Article 70;
 - (e) the redispatching or countertrading cost sharing methodology in accordance with Article 71;
 - (f) capacity allocation and congestion management costs in accordance with Articles 72 to 76.
2. The TSOs of each capacity calculation region applying the flow-based approach shall establish and make available a tool which enables market participants to evaluate how generation, consumption and grid configuration influence feasible cross-border flows between bidding zones.

Article 12
Confidentiality obligations

1. Any confidential information received, exchanged or transmitted pursuant to this Regulation shall be subject to the conditions of professional secrecy laid down in paragraphs 2, 3 and 4.
2. The obligation of professional secrecy shall apply to any person subject to the provisions of this Regulation.
3. Confidential information received by the persons referred to in paragraph 2 in the course of their duties may not be divulged to any other person or authority, without prejudice to cases covered by national law, the other provisions of this Regulation or other relevant Union legislation.
4. Without prejudice to cases covered by national law, the Agency, regulatory authorities, bodies or persons which receive confidential information pursuant to this Regulation may use it only for the purpose of the performance of their functions under this Regulation.

Title II

Requirements for terms, conditions and methodologies concerning Capacity Allocation and Congestion Management

Chapter 1

Capacity calculation

Section 1

General requirements

Article 13
Capacity calculation timeframes

1. All TSOs shall calculate cross-zonal capacity for at least the following timeframes:
 - (a) day-ahead, for the day-ahead market;
 - (b) intraday, for the intraday market.
2. For the day-ahead market timeframe, individual values for cross-zonal capacity for each day-ahead market time unit shall be calculated. For the intraday market timeframe, individual values for cross-zonal capacity for each remaining intraday market time unit shall be calculated.
3. For the day-ahead market timeframe, the capacity calculation shall be based on the latest available information. The information update for the day-ahead market timeframe shall not start before 15.00 market time two days before the day of delivery.
4. All TSOs in each capacity calculation region shall ensure that cross-zonal capacity is recalculated within the intraday market timeframe based on the latest available information. The frequency of this recalculation shall take into consideration efficiency and operational security.

Article 14
Capacity calculation regions

1. By [...] *after the entry into force of this Regulation*] all TSOs shall jointly develop a common proposal regarding the determination of capacity calculation regions. The proposal shall be subject to consultation in accordance with Article 10.
2. The proposal referred to in paragraph 1 shall comply with the following requirements:
 - (a) it shall take into account the regions specified in point 3(2) of Annex 1 to Regulation (EC) No 714/2009;
 - (b) each bidding zone border, or two separate bidding zone borders if applicable, through which interconnection between two bidding zones exists, shall be assigned to one capacity calculation region;
 - (c) each bidding zone shall be assigned to all capacity calculation regions in which it has bidding zone borders.
3. Capacity calculation regions applying a flow-based approach shall be merged into one capacity calculation region if the following cumulative conditions are fulfilled:
 - (a) their transmission systems are directly linked to each other;
 - (b) they are within the same single day-ahead or intraday coupling area;
 - (c) merging them is more efficient than keeping them separate. The competent regulatory authorities may request a joint cost-benefit analysis from the TSOs concerned to assess the efficiency of the merger.

Section 2

The common grid model

Article 15 *Generation and load data provision methodology*

1. By [ten months after the entry into force of this Regulation] all TSOs shall jointly develop a proposal for a single methodology for the delivery of the generation and load data required to establish the common grid model, which shall be subject to consultation in accordance with Article 10. The proposal shall include a justification based on the objectives of this Regulation for requiring the information.
2. The proposal for the generation and load data provision methodology shall specify which generation units and loads are required to provide information to their respective TSOs for the purposes of capacity calculation.
3. The proposal for a generation and load data provision methodology shall specify the information to be provided by generation units and loads to TSOs. The information shall at least include the following:
 - (a) information related to their technical characteristics;
 - (b) information related to the availability of generation units and loads;
 - (c) information related to the schedules of generation units;
 - (d) relevant available information relating to how generation units will be dispatched.
4. The methodology shall specify the deadlines applicable to generation units and loads for providing the information referred to in paragraph 3.
5. Each TSO shall use and share with other TSOs the information referred to in paragraph 3. The information referred to in paragraph 3(d) shall be used for capacity calculation purposes only.
6. No later than two months after the approval of the generation and load data provision methodology by all regulatory authorities, ENTSO for Electricity shall publish:
 - (a) a list of the entities required to provide information to the TSOs;
 - (b) a list of the information referred to in paragraph 3 to be provided;
 - (c) deadlines for providing information.

Article 16 *Common grid model methodology*

1. By [ten months after the entering into force] all TSOs shall jointly develop and submit a proposal for a common grid model methodology to all regulatory authorities and the Agency. The proposal shall be subject to consultation in accordance with Article 10.
2. The common grid model methodology shall enable a common grid model to be established. It shall contain at least the following items:
 - (a) a definition of scenarios in accordance with Article 17;
 - (b) a definition of individual grid models in accordance with Article 18;

- (c) a description of the process for merging individual grid models to form the common grid model.

Article 17
Scenarios

1. All TSOs shall jointly develop common scenarios for each capacity calculation timeframe referred to in Article 13(1) (a) and (b). The common scenarios shall be used to describe a specific forecast situation for generation, load and grid topology for the transmission system in the common grid model.
2. One scenario per each market time unit shall be developed both for the day-ahead and the intraday capacity calculation timeframes.
3. For each scenario, all TSOs shall jointly draw up common rules for determining the net position in each bidding zone and the flow for each direct current line. These common rules shall be based on the best forecast of the net position for each bidding zone and on the best forecast of the flows on each direct current line for each scenario and shall include the overall balance between load and generation for the transmission system in the Union. There shall be no undue discrimination between internal and cross-zonal exchanges when defining scenarios, in line with point 1.7 of Annex I to Regulation (EC) No 714/2009.

Article 18
Individual grid model

1. For each bidding zone and for each scenario:
 - (a) all TSOs in the bidding zone shall jointly provide a single individual grid model which complies with Article 17(3); or
 - (b) each TSO in the bidding zone shall provide an individual grid model for its responsibility area, provided that the sum of net positions in the responsibility areas covering the bidding zone complies with Article 17(3).
2. Each individual grid model shall represent the best possible forecast of transmission system conditions for each scenario specified by the TSO(s) at the time when the individual grid model is created.
3. Individual grid models shall cover all network elements of the transmission system which are relevant for calculating cross-zonal capacity.
4. All TSOs shall harmonise to the maximum possible extent the way in which individual grid models are built.
5. Each TSO shall provide all necessary data in the individual grid model to allow active and reactive power flow and voltage analyses in steady state.
6. Where appropriate, and upon agreement between all TSOs within a capacity calculation region, each TSO in that capacity calculation region shall exchange data between each other to enable voltage and dynamic stability analyses.

Section 3

Capacity calculation methodologies

Article 19

Introduction of flow-based capacity calculation methodology

1. No later than 10 months after the approval of the proposal for a capacity calculation region in accordance with Article 14(1), all TSOs in each capacity calculation region shall develop a proposal for a common coordinated capacity calculation methodology for the respective region. The proposal shall be subject to consultation in accordance with Article 10.
2. For the day-ahead market timeframe and intraday market timeframe the approach used in the capacity calculation methodology shall be a flow-based approach, except where the requirements of paragraph 7 are met.
3. In the capacity calculation region based on the ‘North-West Europe’ and Central Eastern Europe) regions defined in points (b) and (d) of point 3.2 of Annex I to Regulation (EC) No 714/2009, all TSOs from North-West Europe and Central Eastern Europe shall apply a common capacity calculation methodology using the flow-based approach no later than six months, for the day-ahead market timeframe, and twelve months, for the intraday market timeframe, after both regions have implemented the flow-based approach at regional level. If the TSOs concerned are able to demonstrate that the application of the common methodology would not yet be more efficient assuming the same level of system operational security, they may jointly request the competent regulatory authorities from the region to postpone the deadline.
4. No later than six months after France, Switzerland, Austria and Slovenia participate in single day-ahead coupling, the flow-based approach shall be applied in the capacity calculation methodology referred to in paragraph 1 for the region based on Italy as defined in point (c) of point 3.2 of Annex I to Regulation (EC) No 714/2009, except the bidding zone borders within Italy and between Italy and Greece. If the concerned TSOs are able to demonstrate that the application of the flow-based approach in the capacity calculation region would not yet be more efficient assuming the same level of system operational security, they may jointly request the competent regulatory authorities of the region to postpone the deadline
5. No later than six months for the day-ahead market timeframe and twelve months for the intraday market timeframe after Italy, North-West Europe and Central Eastern Europe have implemented the flow-based approach on a regional level, all three regions shall implement a common capacity calculation methodology using the flow-based approach.
6. Croatia, Romania, Bulgaria and Greece together shall introduce a common flow-based approach when Serbia participates in single day-ahead coupling. The competent regulatory authorities of the region formed by Croatia, Romania, Bulgaria and Greece shall decide whether, once these conditions have been met, a transitional period of maximum two years is needed to introduce the flow-based approach on the bidding zone borders of the Member States concerned.
7. The coordinated net transmission capacity approach may be applied in regions and bidding zone borders other than those referred to in paragraphs 3 to 6 and in bidding zone borders within Italy and between Italy and Greece, if the application of the

flow-based approach would not be more efficient compared to the coordinated net transmission capacity approach and assuming the same level of operational security in the concerned region.

8. To enable market participants to adapt to any change in the capacity calculation approach, the TSOs concerned shall test the new approach alongside the existing approach and involve market participants for at least six months before submitting a proposal for changing their capacity calculation approach.

Article 20

Capacity calculation methodology

1. The proposal for a common capacity calculation methodology for a capacity calculation region determined in accordance with Article 19(1) shall include at least the following items for each capacity calculation timeframe:
 - (a) methodologies for the calculation of the inputs to capacity calculation, which shall include the following parameters:
 - (i) a methodology for determining the reliability margin in accordance with Article 21;
 - (ii) the methodologies for determining operational security limits, contingencies relevant to capacity calculation and allocation constraints that may be applied in accordance with Article 22;
 - (iii) the methodology for determining the generation shift keys in accordance with Article 23;
 - (iv) the methodology for determining remedial security actions to be considered in capacity calculation in accordance with Article 24;
 - (v) the methodology for cross-zonal capacity validation in accordance with Article 25.
 - (b) a detailed description of the capacity calculation approach which shall include the following:
 - (i) a mathematical description of the applied capacity calculation approach with different capacity calculation inputs;
 - (ii) rules for avoiding undue discrimination between internal and cross-zonal exchanges to ensure compliance with point 1.7 of Annex I to Regulation (EC) No 714/2009;
 - (iii) rules for taking into account, where appropriate, previously allocated cross-zonal capacity;
 - (iv) rules on the adjustment of power flows on critical network elements or of cross-zonal capacity due to remedial security actions in accordance with Article 24(1);
 - (v) for the flow-based approach, a mathematical description of the calculation of power transfer distribution factors and of the calculation of available margins on critical network elements;

- (vi) for the coordinated net transmission capacity approach, the rules for calculating cross-zonal capacity, including the rules for efficiently sharing the power flow capabilities of critical network elements among different bidding zone borders;
 - (vii) where the power flows on critical network elements are influenced by cross-zonal power exchanges in different capacity calculation regions, the rules for sharing the power flow capabilities of critical network elements among different capacity calculation regions in order to accommodate these flows.
- (c) a methodology for the validation of cross-zonal capacity in accordance with Article 25.
2. For the intraday capacity calculation timeframe, the capacity calculation methodology shall also state the frequency at which capacity will be reassessed in accordance with Article 13(4), giving reasons for the chosen frequency.
 3. The capacity calculation methodology shall include a fallback procedure for the case where the initial capacity calculation does not lead to any results.
 4. By 31 December 2018, all TSOs in each capacity calculation region shall, as far as possible, use harmonised capacity calculation inputs. Within the same deadline, all TSOs shall harmonise the capacity calculation methodologies across capacity calculation regions.

Article 21

Reliability margin methodology

1. All TSOs in each capacity calculation region shall develop and adopt a methodology to determine the reliability margin. The methodology to determine the reliability margin shall consist of two steps. First, the relevant TSOs shall estimate the probability distribution of deviations between the expected power flows at the time of the capacity calculation and realised power flows in real time. Second, the reliability margin shall be calculated by deriving a value from the probability distribution.
2. The methodology to determine the reliability margin shall set out the principles for calculating the probability distribution of the deviations between the expected power flows at the time of the capacity calculation and realised power flows in real time, and specify the uncertainties to be taken into account in the calculation. To determine those uncertainties, the methodology shall in particular take into account:
 - (a) unintended deviations of physical electricity flows within a market time unit caused by the adjustment of electricity flows within and between responsibility areas to maintain a constant frequency;
 - (b) uncertainties which could affect capacity calculation and which could occur between the capacity calculation timeframe and real time, for the market time unit being considered.
3. In the methodology to determine the reliability margin, TSOs shall also set out common harmonised principles for deriving the reliability margin from the probability distribution.

4. On the basis of the methodology adopted in accordance with paragraph 1, TSOs shall determine the reliability margin respecting the operational security limits and taking into account uncertainties between the capacity calculation timeframe and real time, the remedial security actions available after capacity calculation and the financial risks arising from the firmness arrangements applied to allocated capacity.
5. For each capacity calculation timeframe, the TSOs concerned shall determine the reliability margin for critical network elements, where the flow-based approach is applied, and for cross-zonal capacity, where the coordinated net transmission capacity approach is applied.

Article 22

Methodologies for operational security limits, contingencies and allocation constraints

1. Each TSO shall respect the operational security limits and contingencies used in operational security analysis.
2. If the operational security limits and contingencies used in capacity calculation are not the same as those used in operational security analysis, TSOs shall describe in the proposal for the capacity calculation methodology the particular method and criteria they have used to determine the operational security limits and contingencies used for capacity calculation.
3. If TSOs apply allocation constraints, they shall be determined using:
 - (a) constraints that are needed to maintain the transmission system within operational security limits and that cannot be transformed efficiently into maximum flows on critical network elements; or
 - (b) constraints intended to increase the economic surplus for single day-ahead or intraday coupling.

Article 23

Generation shift keys methodology

1. All the TSOs in each bidding zone shall jointly propose one common generation shift key for each scenario developed in accordance with Article 17.
2. The generation shift keys shall represent the best forecast of the relation of a change in the net position of a bidding zone to a specific change of generation or load in the common grid model. That forecast shall notably take into account the information from the generation and load data provision methodology.

Article 24

Methodology for remedial security actions in capacity calculation

1. Each TSO within each capacity calculation region shall individually define the available remedial security actions to be taken into account in capacity calculation to meet the objectives of this Regulation.
2. Each TSO within each capacity calculation region shall coordinate with the other TSOs in that region the use of remedial security actions to be taken into account in capacity calculation and their actual application in real time operation.

3. To enable remedial security actions to be taken into account in capacity calculation, all TSOs in each capacity calculation region shall agree on the use of remedial security actions that require the action of more than one TSO.
4. Each TSO shall ensure that remedial security actions are taken into account in capacity calculation under the condition that the available remedial security actions remaining after calculation, taken together with the reliability margin referred to in Article 21, are sufficient to ensure operational security.
5. Each TSO shall take into account remedial security actions that are available without leading to additional costs.
6. Each TSO shall ensure that the remedial security actions to be taken into account in capacity calculation are the same for all capacity calculation timeframes.

Article 25

Cross-zonal capacity validation methodology

1. Each TSO shall validate and have the right to correct cross-zonal capacity relevant to the TSO's bidding zone borders or critical network elements provided by the coordinated capacity calculators in accordance with Articles 26 to 30.
2. Where a coordinated net transmission capacity approach is applied, all TSOs in the capacity calculation region shall include in the capacity calculation methodology referred to in Article 20 a rule for splitting the correction of cross-zonal capacity between the different bidding zone borders.
3. Each TSO may reduce cross-zonal capacity during the validation of cross-zonal capacity referred to in paragraph 1 for reasons of operational security.
4. Each coordinated capacity calculator shall coordinate with the neighbouring coordinated capacity calculators during capacity calculation and validation.
5. Each coordinated capacity calculator shall, every three months, report all reductions made during the validation of cross-zonal capacity in accordance with paragraph 3 to all regulatory authorities of the capacity calculation region. This report shall include the location and amount of any reduction in cross-zonal capacity and shall give reasons for the reductions.
6. All the regulatory authorities of the capacity calculation region shall decide whether to publish all or part of the report referred to in paragraph 5.

Section 4:

The capacity calculation process

Article 26

General provisions

1. No later than six months after the decision on the generation and load data provision methodology referred to in Article 15 and the common grid model methodology referred to in Article 16, all TSOs shall organise the process of merging the individual grid models.
2. No later than four months after the decisions on the capacity calculation methodologies referred to in Articles 19 and 20, all the TSOs in each capacity

calculation region shall jointly set up the coordinated capacity calculators and establish rules governing their operations.

3. All TSOs of each capacity calculation region shall review the quality of data submitted within the capacity calculation. every second year as part of the biennial report on capacity calculation and allocation produced in accordance with Article 30(2),
4. Using the latest available information, all TSOs shall regularly and at least once a year review and update:
 - (a) the operational security limits, contingencies and allocation constraints used for capacity calculation;
 - (b) the probability distribution of the deviations between expected power flows at the time of capacity calculation and realised power flows in real time used for calculation of reliability margins;
 - (c) the remedial security actions taken into account in capacity calculation;
 - (d) the application of the methodology for determining generation shift keys, critical network elements and contingencies referred to in Articles 21 to 23.

Article 27

Creation of a common grid model

1. For each capacity calculation timeframe referred to in Article 13(1), each generator or load unit subject to Article 15 shall provide the data specified in the generation and load data provision methodology to the TSO responsible for the respective responsibility area within the specified deadlines.
2. Each generator or load unit providing information pursuant to Article 15(3) shall deliver the most reliable set of estimations practicable.
3. For each capacity calculation timeframe, each TSO shall establish the individual grid model for each scenario in accordance with Article 18, in order to merge individual grid models into a common grid model.
4. Each TSO shall deliver to the TSOs responsible for merging the individual grid models into a common grid model the most reliable set of estimations practicable for each individual grid model.
5. For each capacity calculation timeframe a single, Union-wide common grid model shall be created for each scenario as set out in Article 17 by merging inputs from all TSOs applying the capacity calculation process as set out in paragraph 3 of this Article.

Article 28

Regional calculation of cross-zonal capacity

1. For each capacity calculation timeframe, each TSO shall provide the coordinated capacity calculators and all other TSOs in the capacity calculation region with the following items: operational security limits, generation shift keys, remedial security actions, reliability margins, allocation constraints and previously allocated cross-zonal capacity.

2. Each coordinated capacity calculator shall perform an operational security analysis applying operational security limits by using the common grid model created for each scenario in accordance with Article 27(5).
3. When calculating cross-zonal capacity, each coordinated capacity calculator shall:
 - (a) use generation shift keys to calculate the impact of changes in bidding zone net positions and of flows on direct current lines;
 - (b) by prior agreement with concerned TSOs, ignore those critical network elements that are not significantly influenced by the changes in bidding zone net positions; and,
 - (c) ensure that all sets of bidding zone net positions and flows on direct current lines not exceeding cross-zonal capacity comply with reliability margins and operational security limits in accordance with Article 20(1)(a)(i) and (ii), and take into account previously allocated cross-zonal capacity in accordance with Article 20(1)(b)(iii).
4. Each coordinated capacity calculator shall optimise cross-zonal capacity using available remedial security actions taken into account in capacity calculation in accordance with Article 20(1)(a)(iv).
5. Each coordinated capacity calculator shall apply the sharing rules established in accordance with Article 20(1)(b)(vi).
6. Each coordinated capacity calculator shall respect the mathematical description of the applied capacity calculation approach established in accordance with Article 20(1)(b)(i).
7. Each coordinated capacity calculator applying the flow-based approach shall:
 - (a) use data on operational security limits to calculate the maximum flows on critical network elements;
 - (b) use the common grid model, generation shift keys and contingencies to calculate the power transfer distribution factors;
 - (c) use power transfer distribution factors to calculate the flows resulting from previously allocated cross-zonal capacity in the capacity calculation region;
 - (d) calculate flows on critical network elements for each scenario (taking into account contingencies), and adjust them by assuming no cross-zonal power exchanges within the capacity calculation region, applying the rules for avoiding undue discrimination between internal and cross-zonal power exchanges established in accordance with Article 20(1)(b)(ii);
 - (e) calculate the available margins on critical network elements, taking into account contingencies, which shall equal the maximum flows reduced by adjusted flows referred to in point (d), reliability margins, and flows resulting from previously allocated cross-zonal capacity;
 - (f) adjust the available margins on critical network elements or power transfer distribution factors using available remedial security actions to be considered in capacity calculation in accordance with Article 24.
8. Each coordinated capacity calculator applying the coordinated net transmission capacity approach shall:

- (a) use the common grid model, generation shift keys and contingencies to calculate maximum power exchange on bidding zone borders, which shall equal the maximum calculated exchange between two bidding zones on either side of the bidding zone border respecting operational security limits;
 - (b) adjust maximum power exchange using remedial security actions taken into account in capacity calculation in accordance with Article 24;
 - (c) adjust maximum power exchange, applying rules for avoiding undue discrimination between internal and cross-zonal exchanges in accordance with Article 20(1)(b)(ii);
 - (d) apply the rules set out in accordance with Article 20(1)(b)(vi) for efficiently sharing the power flow capabilities of critical network elements among different bidding zone borders;
 - (e) calculate cross-zonal capacity, which shall be equal to maximum power exchange adjusted for the reliability margin and previously allocated cross-zonal capacity.
9. Each coordinated capacity calculator shall cooperate with the neighbouring coordinated capacity calculators. Neighbouring TSOs shall ensure such cooperation by exchanging and confirming information on interdependency with the relevant regional coordinated capacity calculators, for the purposes of capacity calculation and validation. Neighbouring TSOs shall provide information on interdependency to the coordinated capacity calculators before capacity calculation. An assessment of the accuracy of this information and corrective measures shall be included in the biennial report drafted in accordance with Article 30, where appropriate.
10. Each coordinated capacity calculator shall set:
- (a) flow-based parameters for each bidding zone within the capacity calculation region, if applying the flow-based approach; or
 - (b) cross-zonal capacity values for each bidding zone border within the capacity calculation region, if applying the coordinated net transmission capacity approach.
11. Each coordinated capacity calculator shall submit the cross-zonal capacity to each TSO within its capacity calculation region for validation in accordance with Article 20(1)(c).

Article 29

Validation and delivery of cross-zonal capacity

1. Each TSO shall validate the results of the regional capacity calculation for its bidding zone borders or critical network elements, in accordance with Article 25.
2. Each TSO shall send its capacity validation to the relevant coordinated capacity calculators and to the other TSOs of the relevant capacity calculation regions.
3. Each coordinated capacity calculator shall provide the validated cross-zonal capacities for the purposes of allocating capacity in accordance with Articles 44 and 55.
4. Each TSO shall provide allocation constraints for the purposes of allocating capacity in accordance with Articles 44 and 55.

Section 5

Biennial report on capacity calculation and allocation

Article 30

Biennial report on capacity calculation and allocation

1. By [two years after the entry into force of this Regulation], ENTSO for Electricity shall draft a report on capacity calculation and allocation and submit it to the Agency.
2. If the Agency requests it, in every second subsequent year ENTSO for Electricity shall draft a report on capacity calculation and allocation and submit it to the Agency.
3. For each bidding zone, bidding zone border and capacity calculation region, the report on capacity calculation and allocation shall contain at least:
 - (a) the capacity calculation approach used;
 - (b) statistical indicators on reliability margins;
 - (c) statistical indicators of cross-zonal capacity, including allocation constraints where appropriate for each capacity calculation timeframe;
 - (d) quality indicators for the information used for the capacity calculation;
 - (e) where appropriate, proposed measures to improve capacity calculation;
 - (f) for regions where the coordinated net transmission capacity approach is applied, an analysis of whether the conditions specified in Article 19(7) are still fulfilled;
 - (g) indicators for assessing and following in the longer term the efficiency of single day-ahead and intraday coupling, including the merging of capacity calculation regions in accordance with Article 14(3) where relevant;
 - (h) recommendations for further development of single day-ahead and intraday coupling, including further harmonisation of methodologies, processes and governance arrangements.
4. After consulting the Agency, all TSOs shall jointly agree on the statistical and quality indicators for the report. The Agency may require the amendment of those indicators, prior to the agreement by the TSOs or during their application.
5. The Agency shall decide whether to publish all or part of the biennial report.
6. Each TSO shall provide data to allow ENTSO for Electricity draft the report in a timely manner.

Chapter 2

Bidding zone configuration

Article 31

Reviewing existing bidding zone configurations

1. A review of an existing bidding zone configuration may be launched by:

- (a) the Agency, in accordance with Article 33(2)(b);
 - (b) several regulatory authorities, pursuant to a recommendation from the Agency in accordance with Article 33(8);
 - (c) several TSOs, deciding with qualified majority;
 - (d) one single regulatory authority or TSO with the approval of its competent regulatory authority, for the bidding zones inside the TSO's responsibility area, if the bidding zone configuration has negligible impact on neighbouring TSOs' responsibility areas and the review of bidding zone configuration is necessary to improve efficiency, or to maintain operational security;
 - (e) any Member State.
2. If a review is launched in accordance with paragraph 1(a),(b), (c) or (e), the entity launching the review shall specify:
- (a) the geographic areas in which bidding zone configuration shall be assessed and the neighbouring geographic areas for which impacts shall be taken into account;
 - (b) the participating TSOs;
 - (c) the participating regulatory authorities.
3. If a review is launched in accordance with paragraph 1(d), the following conditions shall apply:
- (a) the geographic area in which bidding zone configuration is assessed shall be limited to the responsibility area of the relevant TSO;
 - (b) the TSO of the relevant responsibility area shall be the only TSO participating in the review;
 - (c) the competent regulatory authority shall be the only regulatory authority participating in the review;
 - (d) the relevant TSO and regulatory authority, respectively, shall give the neighbouring TSOs and regulatory authorities mutually agreed prior notice of the launch of the review, giving reasons; and
 - (e) the conditions for the review shall be specified, and the results of the review and proposal for the relevant regulatory authorities shall be published.
4. TSOs participating in a review of bidding zone configuration shall:
- (a) assess bidding zone configurations in a coordinated way, unless paragraph 1(d) applies, and include NEMOs;
 - (b) propose alternative bidding zone configurations;
 - (c) assess and compare the current bidding zone configuration and each alternative bidding zone configuration using the criteria specified in Article 32;
 - (d) hold a consultation in accordance with Article 10 and a workshop regarding the alternative bidding zone configuration proposals compared to the existing bidding zone configuration, including timescales for implementation, unless the bidding zone configuration has negligible impact on neighbouring TSOs' responsibility areas;

- (e) submit proposals to maintain or amend the bidding zone configuration to participating regulatory authorities and Member States within 12 months of the decision to launch a review.
- 5. NEMOs or market participants shall, if requested by TSOs, provide the TSOs participating in a review of a bidding zone with information to enable them to assess bidding zone configurations. This information shall be shared only between the participating TSOs for the sole purpose of assessing bidding zone configurations.
- 6. The initiative for the review of the bidding zones configuration and its results shall be published by ENTSO for Electricity, or if the review was launched in accordance with paragraph 1(d), by the participating TSO.

Article 32

Criteria for reviewing bidding zone configurations

- 1. If a review of bidding zone configuration is carried out in accordance with Article 31, at least the following criteria shall be considered:
 - (a) in respect of network security:
 - (i) the ability of bidding zone configurations to ensure operational security and security of supply;
 - (ii) the degree of uncertainty in cross-zonal capacity calculation;
 - (b) in respect of overall market efficiency:
 - (i) any increase or decrease in economic efficiency arising from the change;
 - (ii) market efficiency, including, at least the cost of guaranteeing firmness of capacity, market liquidity, market concentration and market power, the facilitation of effective competition, price signals for building infrastructure, the accuracy and robustness of price signals and transition costs, including the cost of amending existing contractual obligations incurred by market participants, NEMOs and TSOs;
 - (iii) the cost of building new infrastructure which may relieve existing congestion;
 - (iv) the need to ensure that the market outcome is feasible without the need for extensive application of economically inefficient remedial security actions;
 - (v) any adverse effects of internal transactions on other bidding zones to ensure compliance with point 1.7 of Annex I to Regulation (EC) No 714/2009;
 - (vi) the impact on the operation and efficiency of the balancing mechanisms and imbalance settlement processes;
 - (c) in respect of the stability and robustness of bidding zones:
 - (i) the need for bidding zones to be sufficiently stable and robust over time;
 - (ii) the need for bidding zones to be consistent for all capacity calculation timeframes;
 - (iii) the need for each generation and load unit to belong to only one bidding zone for each market time unit; a

- (iv) the location and frequency of congestion, if structural congestion influences the delimitation of bidding zones, taking into account any future investment which may relieve existing congestion.
2. A bidding zone review in accordance with Article 31 shall include scenarios covering a period of 10 years following the year in which the decision to launch the review was taken.

Article 33

Regular reporting on current bidding zone configuration by ENTSO for Electricity and the Agency

1. The Agency shall assess the efficiency of current bidding zone configuration every two to three years.
- It shall:
- (a) request ENTSO for Electricity to draft a technical report on current bidding zone configuration; and
 - (b) draft a market report evaluating the impact of current bidding zone configuration on market efficiency.
2. The technical report referred to in paragraph 1 second subparagraph point (a) shall include at least:
- (a) a list of structural congestion and other major physical congestion, including locations and frequency;
 - (b) an analysis of the expected evolution or removal of physical congestion resulting from investment in networks or from significant changes in generation or in consumption patterns;
 - (c) an analysis of the share of power flows that do not result from the capacity allocation mechanism, for each capacity calculation region, where appropriate;
 - (d) congestion incomes and firmness costs;
 - (e) a scenario encompassing a ten year timeframe.
3. Each TSO shall provide data and analysis to allow the technical report on current bidding zone configuration to be produced in a timely manner.
4. ENTSO for Electricity shall deliver to the Agency the technical report on current bidding zone configuration no later than nine months after the request by the Agency.
5. The technical report on current bidding zone configuration shall cover the last three full calendar years preceding the request by the Agency.
6. Without prejudice to the confidentiality obligations provided for in Article 12, the participating TSOs shall make the technical report available to the public.
7. If the technical or market report reveals inefficiencies in the current bidding zone configuration, the Agency may request TSOs to propose changes to the bidding zone configuration in accordance with Article 31(1)(a).

Chapter 3

Redispatching and countertrading

Article 34

Coordinated redispatching and countertrading

1. Within sixteen months after the regulatory approval on capacity calculation regions referred to in Article 14, all the TSOs in each capacity calculation region shall develop a proposal for a common methodology for coordinated redispatching and countertrading. The proposal shall be subject to consultation in accordance with Article 10.
2. The methodology for coordinated redispatching and countertrading shall include actions of cross-border relevance and shall enable all TSOs in each capacity calculation region to effectively relieve physical congestion irrespective of whether the reasons for it fall mainly outside their area of responsibility or not. The methodology for coordinated redispatching and countertrading shall address the fact that its application may significantly influence flows outside the TSO's area of responsibility.
3. Each TSO may redispatch all available generation units and loads in accordance with the appropriate mechanisms and agreements applicable to its responsibility area.

By 26 months after the regulatory approval of capacity calculation regions, all TSOs in each capacity calculation region shall develop proposals, subject to consultation in accordance with Article 10, on progressive coordination and harmonisation of those mechanisms and agreements to be submitted to their respective regulatory authorities for approval. Such proposals shall prevent these mechanisms and agreements from distorting the market.
4. Each TSO shall abstain from unilateral or uncoordinated redispatching and countertrading measures of cross-border relevance. Each TSO shall coordinate the use of redispatching and countertrading resources taking into account their impact on operational security and economic efficiency.
5. The relevant generation units and loads shall give TSOs the prices of redispatching and countertrading before redispatching and countertrading resources are committed.

Pricing of redispatching and countertrading shall be based on:
 - (a) prices in the relevant electricity markets for the relevant timeframe; or
 - (b) the cost of redispatching and countertrading resources calculated transparently on the basis of incurred costs.
6. Generation units and loads shall ex-ante provide all information necessary for calculating the redispatching and countertrading cost to the relevant TSOs. This information shall be shared between the relevant TSOs for redispatching and countertrading purposes only.

Chapter 4

Algorithm development

Article 35
General provisions

1. All NEMOs shall develop, maintain and operate the following algorithms:
 - (a) a price coupling algorithm;
 - (b) a continuous trading matching algorithm.
2. NEMOs shall ensure that the price coupling algorithm and the continuous trading matching algorithm meet the requirements provided for in Articles 38 and 50 respectively.
3. By *[16 months after the entry into force of this Regulation]*, all NEMOs shall develop and implement a back-up methodology to comply with the obligations set out in Articles 38 and 50 respectively. The proposal for a methodology shall be subject to consultation in accordance with Article 10.
4. Where possible, NEMOs shall use already agreed solutions to efficiently implement the objectives of this Regulation.

Article 36
Algorithm development

1. By *[six months after the entry into force of this Regulation]*:
 - (a) all TSOs shall jointly provide all NEMOs with a proposal for a common set of requirements for efficient capacity allocation to enable the development of the price coupling algorithm and of the continuous trading matching algorithm. These requirements shall specify functionalities and performance, including deadlines for the delivery of single day-ahead and intraday coupling results and details of the cross-zonal capacity and allocation constraints to be respected;
 - (b) all NEMOs shall jointly propose a common set of requirements for efficient matching to enable the development of the price coupling algorithm and of the continuous trading matching algorithm.
2. No later than three months after the submission of the TSO and NEMO proposals for a common set of requirements in accordance with paragraph 1, all NEMOs shall develop a proposal for the algorithm in accordance with these requirements. This proposal shall indicate the time limit for the submission of received orders by NEMOs required to perform the MCO function in accordance with Article 7(1)(c).
3. The proposal referred to in paragraph 2 shall be submitted to all TSOs. If additional time is required to prepare this proposal, all NEMOs shall work together supported by all TSOs for a period of not more than two months to ensure that the proposal complies with paragraphs 1 and 2.
4. The proposals referred to in paragraphs 1 and 2 shall be subject to consultation in accordance with Article 10.
5. All NEMOs shall submit the proposal developed in accordance with paragraphs 2 and 3 to the regulatory authorities for approval by *[no later than 16 months after the entry into force of this Regulation]*.
6. No later than two years after the approval of the proposal in accordance with paragraph 5, all TSOs and all NEMOs shall review the operation of the price

coupling algorithm and continuous trading matching algorithm. If requested by the Agency, the review shall then be repeated every second year.

Chapter 5

Single day-ahead coupling

Section 1

The price coupling algorithm

Article 37

Objectives of the price coupling algorithm

1. The price coupling algorithm shall produce the results set out in Article 38(2), in a manner which:
 - (a) aims at maximising economic surplus for single day-ahead coupling for the price-coupled region for the next trading day;
 - (b) uses the marginal pricing principle according to which all accepted bids will have the same price per bidding zone per market time unit;
 - (c) facilitates efficient price formation;
 - (d) respects cross-zonal capacity and allocation constraints;
 - (e) is repeatable and scalable.
2. The price coupling algorithm shall be developed in such a way that it would be possible to extend its application to other bidding zones.

Article 38

Inputs and results of the price coupling algorithm

1. In order to produce results, the price coupling algorithm shall use:
 - (a) allocation constraints established in accordance with Article 22(3);
 - (b) cross-zonal capacity results validated in accordance with Article 29;
 - (c) orders submitted in accordance with Article 39.
2. The price coupling algorithm shall produce at least the following results simultaneously for each market time unit:
 - (a) a single clearing price for each bidding zone and market time unit in EUR/MWh;
 - (b) a single net position for each bidding zone and each market time unit;
 - (c) the execution status of orders.
3. All NEMOs shall ensure the accuracy and efficiency of results produced by the single price coupling algorithm.
4. All TSOs shall verify that the results of the price coupling algorithm are consistent with cross-zonal capacity and allocation constraints.

Article 39
Products accommodated

1. All NEMOs shall ensure that orders submitted to the price coupling algorithm are expressed in euros and make reference to the market time.
2. All NEMOs shall ensure that the price coupling algorithm is able to accommodate orders covering one market time unit and multiple market time units.
3. By [*two years after the entry into force of this Regulation*] and in every second subsequent year, all NEMOs shall consult, in accordance with Article 10:
 - (a) market participants, to ensure that available products reflect their needs;
 - (b) all TSOs, to ensure products take due account of operational security;
 - (c) all regulatory authorities, to ensure that the available products comply with the objectives of this Regulation.
4. All NEMOs shall amend the products if needed pursuant to the results of the consultation referred to in paragraph 3.

Article 40
Maximum and minimum prices

1. By [*16 months after the entry into force of this Regulation*], all NEMOs shall, in cooperation with the relevant TSOs, develop a proposal on harmonised maximum and minimum bid prices to be applied in all bidding zones which participate in single day-ahead market coupling. The proposal shall include an implementation date.

The proposal shall be subject to consultation in accordance with Article 10.
2. All NEMOs shall submit the proposal to the regulatory authorities for approval.

After receiving a decision for approval from the regulatory authorities concerned, all NEMOs shall inform the concerned TSOs of that decision without undue delay.

Article 41
Pricing of day-ahead cross-zonal capacity

1. The day-ahead cross-zonal capacity charge shall reflect market congestion and shall amount to the difference between the corresponding day-ahead clearing prices of the relevant bidding zones.
2. No charges, such as imbalance fees or additional fees, shall be applied to day-ahead cross-zonal capacity except for the pricing in accordance with paragraph 1.

Article 42
Methodology for calculating scheduled exchanges resulting from single day-ahead coupling

1. By [*16 months after the entry into force of this Regulation*], TSOs which intend to calculate scheduled exchanges resulting from single day-ahead coupling shall submit a proposal for a common methodology for this calculation for approval to the competent regulatory authorities. The proposal shall be subject to consultation in accordance with Article 10.

The respective TSOs shall either act as a scheduled exchange calculator or delegate it to another TSO in accordance with Article 78.

2. The methodology shall describe the calculation and shall list the information which shall be provided by the relevant NEMOs to the scheduled exchange calculator established in accordance with Article 8(2)(f) and the time limits for delivering this information. The time limit for delivering information shall be no later than 15:30 market time day-ahead.
3. The calculation shall be based on net positions for each market time unit.
4. No later than two years after the approval referred to in paragraph 1, TSOs applying scheduled exchanges shall review the methodology. Thereafter, if requested by the competent regulatory authorities, the methodology shall be reviewed every two years.

Article 43

Establishment of fallback procedures

By [16 months after the entry into force of this Regulation], each TSO, in coordination with all the other TSOs in the capacity calculation region, shall establish and operate robust and timely fallback procedures to ensure efficient, transparent and non-discriminatory capacity allocation in the event that the single day-ahead coupling process is unable to produce results.

The proposal for the establishment of fallback procedures shall be subject to consultation in accordance with Article 10.

Section 2

The single day-ahead coupling process

Article 44

Provision of input data

1. Each coordinated capacity calculator shall ensure that cross-zonal capacity and allocation constraints shall be provided to relevant NEMOs in time to ensure the publication of cross-zonal capacity and of allocation constraints to the market no later than 11:00 market time day-ahead.
2. If a coordinated capacity calculator is unable to provide for cross-zonal capacity and allocation constraints one hour prior to the day-ahead market gate closure time, that coordinated capacity calculator shall notify the relevant NEMOs. These NEMOs shall immediately publish a notice for market participants.

In such cases, cross-zonal capacity and allocation constraints shall be provided by the coordinated capacity calculator no later than 30 minutes before the day-ahead market gate closure time.

Article 45

Operation of single day-ahead coupling

1. The day-ahead market gate opening time shall be at the latest 11:00 market time day-ahead.

2. The day-ahead market gate closure time in each bidding zone shall be noon market time day-ahead.
3. Market participants shall submit all orders to the relevant NEMOs before day-ahead market gate closure time, in accordance with Articles 38 and 39.
4. Each NEMO shall submit the orders received in accordance with paragraph 3 to perform the MCO functions in accordance with Article 7(2) by no later than a time specified by all NEMOs in the proposal for a single price coupling algorithm set out in Article 36(3).
5. Orders matched in single day-ahead coupling shall be considered firm.
6. MCO functions shall ensure anonymity of submitted orders.

Article 46

Delivery of results

1. No later than by the time specified by all TSOs in the requirements set out in Article 36(1)(a), all NEMOs acting as MCO shall deliver the single day-ahead coupling results:
 - (a) to all TSOs, all coordinated capacity calculators and all NEMOs, for the results specified in Article 38(2)(a) and (b);
 - (b) to all NEMOs, for the results specified in Article 38(2)(c).
2. Each TSO shall verify that the single day-ahead coupling results of the price coupling algorithm referred to in Article 38(2)(b) have been calculated in accordance with the allocation constraints and validated cross-zonal capacity.
3. Each NEMO shall verify that the single day-ahead coupling results of the price coupling algorithm referred to in Article 38(2)(c) have been calculated in accordance with the orders.
4. Each NEMO shall inform market participants on the execution status of their orders without unjustifiable delay.

Article 47

Calculation of scheduled exchanges resulting from single day-ahead coupling

1. Each scheduled exchange calculator shall calculate scheduled exchanges between bidding zones for each market time unit in accordance with the methodology established in Article 42.
2. Each scheduled exchange calculator shall notify relevant NEMOs, central counter parties, shipping agents and TSOs of the agreed scheduled exchanges.

Article 48

Initiation of fallback procedures

1. In the event that all NEMOs are unable to deliver part or all of the results of the price coupling algorithm by the time specified in Article 36(1)(a), the fall-back procedures established in accordance with Article 43 shall apply.
2. In cases where there is a risk that all NEMOs are unable to deliver part or all of the results within the deadline, all NEMOs shall notify all TSOs as soon as the risk is

identified. All NEMOs shall immediately publish a notice to market participants that fallback procedures may be applied.

Chapter 6

Single intraday coupling

Section 1

Objectives, conditions and results of single intraday coupling

Article 49

Objectives of the continuous trading matching algorithm

1. From the intraday cross-zonal gate opening time until the intraday cross-zonal gate closure time, the continuous trading matching algorithm shall determine which orders to select for matching such that matching:
 - (a) aims at maximising economic surplus for single intraday coupling per trade for the intraday market timeframe by allocating capacity to orders for which it is feasible to match in accordance with the price and time of submission;
 - (b) respects the allocation constraints provided in accordance with Article 55(1);
 - (c) respects the cross-zonal capacity provided in accordance with Article 55(1);
 - (d) respects the requirements for the delivery of results set out in Article 57;
 - (e) is repeatable and scalable.
2. The continuous trading matching algorithm shall produce the results provided for in Article 50 and correspond to the product capabilities and functionalities set out in Article 51.

Article 50

Inputs and results of the continuous trading matching algorithm

1. All NEMOs, as part of their MCO function, shall ensure that the continuous trading matching algorithm produces at least the following results:
 - (a) the execution status of orders and prices per trade;
 - (b) a single net position for each market time unit within the intraday market.
2. All NEMOs shall ensure the accuracy and efficiency of results produced by the single continuous trading matching algorithm.
3. All TSOs shall verify that the results of the continuous trading matching algorithm are consistent with cross-zonal capacity and allocation constraints in accordance with Article 55(2).

Article 51

Products accommodated

1. All NEMOs shall ensure that all orders submitted to enable the MCO functions to be performed in accordance with Article 7 are expressed in euros and make reference to the market time and the market time unit.
2. All NEMOs shall ensure that products are compatible with the characteristics of cross-zonal capacity, allowing them to be matched simultaneously.

3. All NEMOs shall ensure that the continuous trading matching algorithm is able to accommodate orders covering one market time unit and multiple market time units.
4. By [*two years after the entry into force of this Regulation*] and in every second subsequent year, all NEMOs shall consult in accordance with Article 10:
 - (a) market participants, to ensure that available products reflect their needs;
 - (b) all, TSOs, to ensure products take due account of operational security;
5. All NEMOs shall amend the products if needed pursuant to the results of the consultation referred to in paragraph 4.

Article 52

Maximum and minimum prices

1. By [*16 months after the entry into force of this Regulation*], all NEMOs shall, in cooperation with the relevant TSOs, develop a proposal on harmonised maximum and minimum bid prices to be applied in all bidding zones which participate in single intraday coupling. The proposal shall be subject to consultation in accordance with Article 10.
2. All NEMOs shall submit the proposal to all regulatory authorities for approval.
3. After receiving a decision from the regulatory authorities, all NEMOs shall inform the concerned TSOs of that decision without unjustifiable delay.

Article 53

Pricing of intraday capacity

1. The intraday cross-zonal capacity charge shall reflect market congestion and shall be based on actual orders.
2. Prior to the approval of the single methodology for pricing intraday cross-zonal capacity set out in paragraph 3, TSOs may propose an intraday cross-zonal capacity allocation mechanism with reliable pricing consistent with the requirements of paragraph 1 for approval by the regulatory authorities of the relevant Member States. This mechanism shall ensure that the price of intraday cross-zonal capacity is available to the market participants at the time of matching the orders.
3. By [*24 months after the entry into force of this Regulation*], all TSOs shall submit a proposal for a single methodology for pricing intraday cross-zonal capacity to all regulatory authorities and the Agency. The proposal shall be subject to consultation in accordance with Article 10.
4. No charges, such as imbalance fees or additional fees, shall be applied to intraday cross-zonal capacity except for the pricing in accordance with paragraphs 1, 2 and 3.

Article 54

Methodology for calculating scheduled exchanges resulting from single intraday coupling

1. By [*16 months after the entry into force of this Regulation*], the TSOs which intend to calculate scheduled exchanges resulting from single intraday coupling shall submit a proposal for a common methodology for this calculation to the competent regulatory authorities for approval.

The proposal shall be subject to consultation in accordance with Article 10.

2. The methodology shall describe the calculation and, where required, shall list the information which the relevant NEMOs shall provide to the scheduled exchange calculator and the time limits for delivering this information.
3. The calculation of scheduled exchanges shall be based on net positions as specified in Article 50(1)(b).
4. No later than two years after the approval referred to in paragraph 1, the relevant TSOs shall review the methodology. Thereafter, if requested by the competent regulatory authorities, the TSOs shall review the methodology every two years.

Section 2

The single intraday coupling process

Article 55

Provision of input data

1. Each coordinated capacity calculator shall ensure that cross-zonal capacity and allocation constraints are provided to the relevant NEMOs no later than 15 minutes before the intraday cross-zonal gate opening time.
2. If updates to cross-zonal capacity and allocation constraints are required, due to operational changes on the transmission system, each TSO shall notify the coordinated capacity calculators in its capacity calculation region. The coordinated capacity calculators shall then notify the relevant NEMOs.
3. If any coordinated capacity calculator is unable to comply with paragraph 1, that coordinated capacity calculator shall notify the relevant NEMOs. These NEMOs shall publish a notice to all market participants without unjustifiable delay.

Article 56

Operation of single intraday coupling

1. By [16 months after the entry into force of this Regulation], all TSOs shall be responsible for proposing the intraday cross-zonal gate opening and intraday cross-zonal gate closure times. The proposal shall be subject to consultation in accordance with Article 10.
2. The intraday cross-zonal gate closure time shall be set in such a way that it:
 - (a) maximises market participants' opportunities for adjusting their balances by trading in the intraday market timeframe as close as possible to real time; and
 - (b) provides TSOs and market participants with sufficient time for their scheduling and balancing processes in relation to network and operational security.
3. One intraday cross-zonal gate closure time shall be established for each market time unit for a given bidding zone border. It shall be at most one hour before the start of the relevant market time unit and shall take into account the relevant balancing processes in relation to operational security.
4. The intraday energy trading for a given market time unit for a bidding zone border shall start at the latest at the intraday cross-zonal gate opening time of the relevant

bidding zone borders and shall be allowed until the intraday cross-zonal gate closure time.

5. Before the intraday cross-zonal gate closure time, market participants shall submit to relevant NEMOs all the orders for a given market time unit. All NEMOs shall submit the orders for a given market time unit for single matching immediately after the orders have been received from market participants.
6. Orders matched in single intraday coupling shall be considered firm.
7. MCO functions shall ensure the anonymity of orders submitted via the shared order book.

Article 57

Delivery of results

1. All NEMOs acting as MCO shall deliver the continuous trading matching algorithm results:
 - (a) to all other NEMOs, for results on the execution status per trade specified in Article 50(1)(a).
 - (b) to all TSOs, for results single net positions specified in Article 50(1)(b).
2. If, in accordance with paragraph 1(a), any NEMO, for reasons outside its responsibility, is unable to deliver these continuous trading matching algorithm results, it shall notify all other NEMOs.
3. If, in accordance with paragraph 1(b), any NEMO, for reasons outside its responsibility, is unable to deliver these continuous trading matching algorithm results, it shall notify all TSOs and each scheduled exchange calculator as soon as reasonably practicable. All TSOs and the scheduled exchange calculators shall notify the market participants concerned.
4. All NEMOs shall send, without undue delay, the necessary information to market participants to ensure that the actions specified in Articles 65 and 70(3) can be undertaken.

Article 58

Calculation of scheduled exchanges resulting from single intraday coupling

1. Each scheduled exchange calculator shall calculate scheduled exchanges between bidding zones for each market time unit in accordance with the methodology established in accordance with Article 54.
2. Each scheduled exchange calculator shall notify the relevant NEMOs, central counter parties, shipping agents, and TSOs of the agreed scheduled exchanges.

Article 59

Publication of market information

1. As soon as the orders are matched, each NEMO shall publish at least the status of execution of orders and prices per trade produced by the continuous trading matching algorithm in accordance with Article 50(1)(a).

2. Each NEMO shall ensure that the information published in accordance with paragraph 1 is made publicly available in an easily accessible format for at least 5 years.

Article 60

Complementary regional auctions

1. By [16 months after the entry into force of this Regulation], the relevant NEMOs and TSOs may submit a common proposal for the design and implementation of complementary regional intraday auctions. The proposal shall be subject to consultation in accordance with Article 10.
2. Complementary regional intraday auctions may be implemented within or between bidding zones in addition to the single intraday coupling solution referred to in Article 49. In order to hold regional intraday auctions, continuous trading within and between the relevant bidding zones may be stopped for a limited period of time before the intraday cross-zonal gate closure time, which shall not exceed the minimum time required to hold the auction and in any case 10 minutes.
3. For complementary regional intraday auctions, the methodology for pricing intraday cross-zonal capacity may differ from the methodology established in accordance with Article 53(3) but it shall nevertheless meet the principles provided for in Article 53(1).
4. The competent regulatory authorities may approve the proposal for complementary regional intraday auctions if the following conditions are met:
 - (a) regional auctions shall not have an adverse impact on the liquidity of the single intraday coupling;
 - (b) all cross-zonal capacity shall be allocated through the capacity management module;
 - (c) the regional auction shall not introduce any undue discrimination between market participants from adjacent regions;
 - (d) the timetables for regional auctions shall be consistent with single intraday coupling to enable market participants to trade as close as possible to real-time;
 - (e) regulatory authorities shall have consulted the market participants in the Member States concerned.
5. At least every two years after the decision on complementary regional auctions, the regulatory authorities of the Member States concerned shall review the compatibility of any regional solutions with single intraday coupling to ensure that the conditions above continue to be fulfilled.

Section 3

Transitional intraday arrangements

Article 61

Provisions relating to explicit allocation

1. Where requested by the regulatory authorities of the Member States concerned, in addition to implicit allocation, the TSOs concerned shall also provide explicit allocation, that is to say, capacity allocation separate from the electricity trade, via the capacity management module on bidding zone borders.
2. The TSOs concerned shall publish the conditions that shall be fulfilled by market participants to participate in explicit allocation. These conditions shall be subject to approval by the regulatory authorities of the Member States concerned.
3. When establishing the capacity management module, discrimination shall be avoided when simultaneously allocating capacity implicitly and explicitly. The capacity management module shall determine which orders to select for matching and which explicit capacity requests to accept, according to a ranking of price and time of entrance.

Article 62

Removal of explicit allocation

1. The NEMOs concerned shall cooperate closely with the TSOs concerned and shall consult market participants in accordance with Article 10 in order to translate the needs of market participants linked to explicit capacity allocation rights into non-standard intraday products.
2. Prior to the removal of explicit allocation, the competent regulatory authorities shall organise a consultation to assess whether the proposed non-standard intraday products meet the market participants' needs for intraday trading.
3. Competent regulatory authorities shall approve the introduction of non-standard products and the removal of explicit allocation.

Article 63

Provisions relating to intraday arrangements

1. Market participants shall ensure the completion of nomination, clearing and settlement related to explicit allocation of cross-zonal capacity.
2. Market participants shall fulfil any financial obligations, relating to clearing and settlement arising from explicit allocation.
3. The participating TSOs shall publish relevant information on the interconnections to which explicit allocation is applicable, including the cross-zonal capacity for explicit allocation.

Article 64

Explicit requests for capacity

A request for explicit cross-zonal capacity may be submitted by a market participant only for an interconnection where the explicit allocation is applicable. For each request for explicit capacity the market participant shall submit the volume and the price to the capacity

management module. The price and volume of explicit allocated capacity shall be made publicly available by the relevant TSOs.

Chapter 7

Clearing and settlement for single day-ahead and intraday coupling

Article 65

Clearing and settlement

1. The central counter parties shall ensure clearing and settlement of all matched orders in a timely manner. The central counter parties shall act as the counter party to market participants for all their trades with regard to the financial rights and obligations arising from these trades.
2. Each central counter party shall maintain anonymity between market participants.
3. Central counter parties shall act as counter party to each other for the exchange of energy between bidding zones with regard to the financial rights and obligations arising from these energy exchanges.
4. Such exchanges shall take into account:
 - (a) net positions produced in accordance with Articles 38(2)(b) and 50(1)(b);
 - (b) scheduled exchanges calculated in accordance with Articles 47 and 58.
5. Each central counter party shall ensure that for each market time period:
 - (a) across all bidding zones, taking into account, where appropriate, allocation constraints, there are no deviations between the sum of energy transferred out of all bidding zones and the sum of energy transferred into all other bidding zones;
 - (b) electricity exports and electricity imports between bidding zones equal each other, with any deviations resulting only from considerations of allocation constraints, where appropriate.
6. Notwithstanding paragraph 3, a shipping agent may act as a counter party between different central counter parties for the exchange of energy, if the parties concerned conclude a specific agreement to that effect. If no agreement is reached, the shipping arrangement shall be decided by the regulatory authorities responsible for the bidding zones between which the clearing and settlement of the exchange of energy is needed.
7. All central counter parties or shipping agents shall collect congestion incomes arising from the single day-ahead coupling specified in Articles 44 to 46 and from the single intraday coupling specified in Articles 55 to 57.
8. All central counter parties or shipping agents shall ensure that collected congestion incomes are transferred to the TSOs no later than two weeks after the date of settlement.
9. If the timing of payments is not harmonised between two bidding zones, the Member States concerned shall ensure that an entity is appointed to manage the timing mismatch and to bear the relevant costs.

Chapter 8

Firmness of allocated cross-zonal capacity

Article 66

Proposal for day-ahead firmness deadline

By [16 months after the entry into force of this Regulation], all TSOs shall submit a common proposal for a single day-ahead firmness deadline to NRAs, which shall not be shorter than half an hour before the day-ahead market gate closure time. The proposal shall be subject to consultation in accordance with Article 10.

Article 67

Firmness of day-ahead capacity and allocation constraints

1. Prior to the day-ahead firmness deadline, each coordinated capacity calculator may adjust cross-zonal capacity and each TSO may adjust the allocation constraints provided to relevant NEMOs.
2. After the day-ahead firmness deadline, all cross-zonal capacity and allocation constraints shall be firm for day-ahead capacity allocation unless the requirements of Article 44(2) and (3) are met, in which case cross-zonal capacity and allocation constraints shall be firm as soon as they are submitted to relevant NEMOs.
3. After the day-ahead firmness deadline, cross-zonal capacity which has not been allocated may be adjusted for subsequent allocations.

Article 68

Firmness of intraday capacity

Cross-zonal intraday capacity shall be firm as soon as it is allocated.

Article 69

Firmness in the event of force majeure or emergency situations

1. In the event of force majeure or an emergency situation referred to in Article 16(2) of Regulation (EC) No 714/2009, where the TSO shall act in an expeditious manner and redispatching or countertrading is not possible, each TSO shall have the right to curtail cross-zonal allocated capacity. In all cases, curtailment shall be undertaken in a coordinated manner following liaison with all directly concerned TSOs.
2. A TSO which invokes force majeure or an emergency situation shall publish a notice explaining the nature of the force majeure or the emergency situation and its probable duration. This notice shall be made available to the market participants concerned through NEMOs. If capacity is allocated explicitly to market participants, the TSO invoking force majeure or an emergency situation shall send notice directly to contractual parties holding cross-zonal capacity for the relevant market timeframe.
3. If allocated capacity is curtailed because of force majeure or an emergency situation invoked by a TSO, the TSO shall reimburse or provide compensation for the period of force majeure or the emergency situation, in accordance with the following requirements:

- (a) if there is implicit allocation, central counter parties or shipping agents shall not be subject to financial damage or financial benefit arising from any imbalance created by such curtailment;
 - (b) in the event of force majeure, if capacity is allocated via explicit allocation, market participants shall be entitled to reimbursement of the price paid for the capacity during the explicit allocation process;
 - (c) in an emergency situation, if capacity is allocated via explicit allocation, market participants shall be entitled to compensation equal to the price difference of relevant markets between the bidding zones concerned in the relevant time frame; or
 - (d) in an emergency situation, if capacity is allocated via explicit allocation but the bidding zone price is not calculated in at least one of the two relevant bidding zones in the relevant time frame, market participants shall be entitled to reimbursement of the price paid for capacity during the explicit allocation process.
4. The TSO invoking force majeure or an emergency situation shall limit the consequences and duration of the force majeure situation or emergency situation.

Title III

Costs

Chapter 1

Congestion income distribution methodology for single day-ahead and intraday coupling

Article 70

Congestion income distribution methodology

1. By [12 months after the entry into force of this Regulation], all TSOs shall develop a proposal for a methodology for sharing congestion income.
2. The methodology developed in accordance with paragraph 1 shall:
 - (a) facilitate the efficient long-term operation and development of the electricity transmission system and the efficient operation of the electricity market of the Union;
 - (b) comply with the general principles of congestion management provided for in Article 16 of Regulation (EC) No 714/2009;
 - (c) allow for reasonable financial planning;
 - (d) be compatible across timeframes;
 - (e) establish arrangements to share congestion income deriving from transmission assets owned by parties other than TSOs.
3. TSOs shall distribute congestion incomes in accordance with the methodology or methodologies established in Article 70 as soon as reasonably practicable and no later than one week after the congestion incomes have been transferred in accordance with Article 65(8).

Chapter 2

Redispatching and countertrading cost sharing methodology for single day-ahead and intraday coupling

Article 71

Redispatching and countertrading cost sharing methodology

1. No later than 16 months after the decision on the capacity calculation regions is taken, all TSOs in each capacity calculation region shall develop a proposal for a common methodology for redispatching and countertrading cost sharing.
2. The redispatching and countertrading cost sharing methodology shall include cost-sharing solutions for actions of cross-border relevance.
3. Redispatching and countertrading costs eligible for cost sharing between relevant TSOs shall be determined in a transparent and auditable manner.
4. The redispatching and countertrading cost sharing methodology shall at least:
 - (a) determine which costs incurred from using remedial security actions, for which costs have been considered in the capacity calculation and where a common framework on the use of such actions has been established, are eligible for sharing between all the TSOs of a capacity calculation region in accordance with the capacity calculation methodology set out in Articles 19 and 20;
 - (b) define which costs incurred from using redispatching or countertrading to guarantee the firmness of cross-zonal capacity are eligible for sharing between all the TSOs of a capacity calculation region in accordance with the capacity calculation methodology set out in Articles 19 and 20;
 - (c) set rules for region-wide cost sharing as determined in accordance with points (a) and (b).
5. The methodology developed in accordance with paragraph 1 shall include:
 - (a) a mechanism to verify the actual need for redispatching or countertrading between the TSOs involved;
 - (b) an ex post mechanism to monitor the use of remedial security actions with costs;
 - (c) a mechanism to assess the impact of the remedial security actions, based on operational security and economic criteria;
 - (d) a process allowing improvement of the remedial security actions;
 - (e) a process allowing monitoring of each capacity calculation region by the competent regulatory authorities.
6. The methodology developed in accordance with paragraph 1 shall also:
 - (a) provide incentives to manage congestion, including remedial security actions and investment effectively;
 - (b) be consistent with the responsibilities and liabilities of the TSOs involved;
 - (c) ensure a fair distribution of costs and benefits between the TSOs involved;

- (d) be consistent with other related mechanisms, including at least:
 - (i) the methodology for sharing congestion income set out in Article 70;
 - (ii) the inter-TSO compensation mechanism, as set out in Article 13 of Regulation (EC) No 714/2009 and Commission Regulation (EU) No 838/2010⁴;
 - (e) facilitate the efficient long-term development and operation of the pan-European Interconnected System and the efficient operation of the pan-European electricity market;
 - (f) facilitate adherence to the general principles of congestion management as set out in Article 16 of Regulation (EC) No 714/2009;
 - (g) allow reasonable financial planning;
 - (h) be compatible across the day-ahead and intraday market timeframes; and
 - (i) comply with the principles of transparency and non-discrimination.
7. By 31 December 2018, all TSOs of each capacity calculation region shall harmonise the redispatching or countertrading cost sharing methodologies across capacity calculation regions.

Chapter 3

Capacity allocation and congestion management cost recovery

Article 72

General provisions on cost recovery

1. Costs relating to the obligations imposed on TSOs in accordance with Article 8, including the costs specified in Article 71 and Articles 73 to 76, shall be assessed by the competent regulatory authorities. Costs assessed as reasonable, efficient and proportionate shall be recovered in a timely manner through network tariffs or other appropriate mechanisms as determined by the competent regulatory authorities.
2. Member States' share of the common costs referred to in Article 77(2)(a), regional costs referred to in Article 77(2)(b) and national costs referred to in Article 77(2)(c) assessed as reasonable, efficient and proportionate shall be recovered through NEMO fees, network tariffs or other appropriate mechanisms as determined by the competent regulatory authorities.
3. If requested by the regulatory authorities, relevant TSOs, NEMOs and delegates in accordance with Article 78 shall, within three months of the request, provide information necessary to facilitate the assessment of the costs incurred.

Article 73

Costs of establishing, amending and operating single day-ahead and intraday coupling

1. All NEMOs shall bear the following costs:

⁴ Commission Regulation (EU) No 838/2010 of 23 September 2010 on laying down guidelines relating to the inter-transmission system operator compensation mechanism and common regulatory approach to transmission charging (OJ L 250, 24.9.2010, p. 5).

- (a) common, regional and national costs of establishing, updating or further developing the price coupling algorithm for the single day-ahead coupling and single day-ahead coupling processes;
 - (b) common, regional and national costs of establishing, updating or further developing the continuous trading matching algorithm and single intraday coupling;
 - (c) common, regional and national costs of operating single day-ahead and intraday coupling.
2. Subject to agreement with the NEMOs concerned, TSOs may make a contribution to the costs provided for in paragraph 1 subject to arrangements with the relevant regulatory authorities. In such cases, within two months of receiving a forecast from the NEMOs concerned, TSOs shall be entitled to provide a cost contribution proposal to the relevant regulatory authorities for approval.
3. The forecast submitted by the NEMOs concerned to TSOs in accordance with paragraph 2 shall include the costs provided for in paragraph 1.
4. The NEMOs concerned shall be entitled to recover costs in accordance with paragraph 1 which have not been borne by TSOs in accordance with paragraph 2 by means of fees or other appropriate mechanisms only if they are reasonable and proportionate, through national agreements with regulatory authorities.

Article 74

Clearing and settlement costs

1. All costs incurred by central counter parties shall be recoverable by means of fees or other appropriate mechanisms if they are reasonable and proportionate.
2. The central counter parties and shipping agents shall seek efficient clearing and settlement arrangements avoiding unnecessary costs and reflecting the risk incurred. The cross-border clearing and settlement arrangements shall be subject to approval by the relevant regulatory authorities.

Article 75

Costs of establishing and operating the coordinated capacity calculation process

1. Each TSO shall individually bear the costs of providing inputs to the capacity calculation process.
2. All TSOs shall bear jointly the costs of merging the individual grid models. All TSOs in each capacity calculation region shall bear the costs of establishing and operating the coordinated capacity calculators.
3. Any costs incurred by market participants in meeting the requirements of this Regulation shall be borne by those market participants.

Article 76

Costs of ensuring firmness

The costs of ensuring firmness in accordance with Articles 67(2) and 68 shall be borne by the relevant TSOs. These costs shall include the costs of redispatching, countertrading, correcting

imbalances, incurred market mechanism imbalances and compensation mechanisms associated with ensuring firmness.

Article 77

Cost sharing between NEMOs and TSOs in different Member States

1. All relevant NEMOs and TSOs shall provide a yearly report to the regulatory authorities in which the costs of establishing, amending and operating single day-ahead and single intraday coupling are explained in detail. This report shall be published by the Agency. Costs directly related to single day-ahead coupling and single intraday coupling shall be clearly identified and auditable.
2. The costs referred to in paragraph 1 shall be broken down into:
 - (a) common costs resulting from coordinated activities of all NEMOs or TSOs participating in the single day-ahead and single intra-day coupling;
 - (b) regional costs resulting from activities of NEMOs or TSOs cooperating in a certain region;
 - (c) national costs resulting from activities of the NEMOs or TSOs in that Member State.
3. Common costs referred to in paragraph 2(a) shall be shared among the TSOs and NEMOs in the Member States and third countries participating in the single day-ahead and single intra-day coupling. To calculate the amount to be paid by the TSOs and NEMOs in each Member State and, if applicable, third countries, one eighth of the common cost shall be divided equally between each Member State and third country, five eighths shall be divided between each Member State and third country proportionally to their consumption, and two eighths shall be divided equally between the participating NEMOs. To take into account changes in the common costs or changes in the participating TSOs and NEMOs, the calculation of common costs shall be regularly adapted.
4. Regional costs in accordance with paragraph 2(b) shall be shared among the NEMOs and TSOs by common agreement.
5. The cost sharing principles shall apply to costs incurred from the entry into force of this Regulation.

Title IV

Delegation of tasks and monitoring

Article 78

Delegation of tasks

1. A TSO or NEMO may delegate all or part of any function assigned to it under this Regulation to one or more third parties in the case the third party can carry out the respective function as effectively as the delegating entity. The delegating entity shall remain responsible for ensuring compliance with the obligations under this Regulation, including ensuring access to information necessary for monitoring by the regulatory authority.
2. Prior to the delegation, the third party concerned shall have clearly demonstrated to the delegating party its ability to meet each of the obligations of this Regulation.

3. In the event that all or part of any task specified in this Regulation is delegated to a third party, the delegating party shall ensure that suitable confidentiality agreements in accordance with the confidentiality obligations of the delegating party have been put in place prior to delegation.

Article 79
Monitoring

1. The regulatory authorities shall monitor each NEMO designated in their territory. The entity or entities performing the MCO functions shall be monitored by the regulatory authorities responsible for the locations where this function is applied. The regulatory authorities responsible for monitoring a NEMO and the MCO function shall fully cooperate and shall provide access to information for other regulatory authorities and the Agency in order to ensure proper monitoring of single day-ahead and single intraday coupling in accordance with Article 38 of Directive 2009/72/EC.
2. Monitoring of the implementation single day-ahead and intraday coupling by ENTSO for Electricity in accordance with Article 8(8) of Regulation (EC) No 714/2009 shall in particular cover the following matters:
 - (a) progress and potential problems with the implementation of single day-ahead and intraday coupling, including the choice of different available options in each country;
 - (b) preparing the report on capacity calculation and allocation in accordance with Article 30(1);
 - (c) the efficiency of current bidding zone configuration in accordance with Article 33(2)(a);
 - (d) the effectiveness of the operation of the price coupling algorithm and of the continuous trading matching algorithm in cooperation with NEMOs in accordance with Article 36(6); and
 - (e) the review of the methodology for calculating scheduled exchanges resulting from single day-ahead coupling in accordance with Article 42(4).
3. ENTSO for Electricity shall submit a monitoring plan which includes the reports to be prepared and any updates in accordance with paragraph 2, to the Agency for an opinion by *[six months after entry into force of this Regulation]*.
4. The Agency, in cooperation with ENTSO for Electricity, shall draw up by *[six months after the entry into force of this Regulation]* a list of the relevant information to be communicated by ENTSO for Electricity to the Agency in accordance with Articles 8(9) and 9(1) of Regulation (EC) No 714/2009. The list of relevant information may be subject to updates. ENTSO for Electricity shall maintain a comprehensive, standardised format, digital data archive of the information required by the Agency.
5. All TSOs shall submit to ENTSO for Electricity the information required to perform the tasks in accordance with paragraphs 2 and 4.
6. Where necessary to supplement the information obtained by the Agency and the regulatory authorities in the context of their respective implementation monitoring tasks, NEMOs, market participants and other relevant organisations regarding single

day-ahead and intraday coupling shall, at the request of the Agency, submit to ENTSO for Electricity the information required for monitoring in accordance with paragraph 4.

Title V

Transitional and final provisions

Article 80

Transitional provisions for Ireland and Northern Ireland

1. The requirements of this Regulation shall not apply in Ireland and Northern Ireland until 31 December 2016.
2. From [*the date of the entry into force of this Regulation*] until 31 December 2016, Ireland and Northern Ireland shall implement preparatory transitional arrangements. Those transitional arrangements shall:
 - (a) facilitate the transition to full implementation of and compliance with this Regulation by 31 December 2016;
 - (b) guarantee a reasonable degree of integration with the markets in adjacent jurisdictions;
 - (c) provide for at least:
 - (i) allocation of interconnector capacity in an explicit day-ahead auction and in at least two implicit intraday auctions;
 - (ii) joint nomination of interconnection capacity and energy at the day-ahead market timeframe;
 - (iii) application of the ‘Use-It-Or-Lose-It’ or ‘Use-It-Or-Sell-It’ principle, as specified in point 2.5 of Annex I to Regulation (EC) No 714/2009 , to capacity not used at the day-ahead market timeframe;
 - (d) ensure fair and non-discriminatory pricing of interconnector capacity in the implicit intraday auctions;
 - (e) put in place fair, transparent and non-discriminatory compensation mechanisms for ensuring firmness;
 - (f) set out a detailed roadmap, approved by the regulatory authorities for Ireland and Northern Ireland, with milestones for achieving full implementation of and compliance with this Regulation;
 - (g) be subject to a consultation process in accordance to Article 10, involving all relevant parties and give the utmost consideration to the consultation’s outcome;
 - (h) be justified on the basis of a cost-benefit analysis;
 - (i) not unduly affect other jurisdictions.
3. Regulatory authorities for Ireland and Northern Ireland shall provide to the Agency at least quarterly, or upon the Agency’s request, any information required for assessing the transitional arrangements for the electricity market on the island of

Ireland and the progress towards achieving full implementation of and compliance with this Regulation.

Article 81
Entry into force

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

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

Done at Brussels,

For the Commission
The President