



**COMMISSION REGULATION (EU) 2015/1222****of 24 July 2015****establishing a guideline on capacity allocation and congestion management****(Text with EEA relevance)**

## 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 and intraday coupling may be opened to market operators and TSOs operating in Switzerland on the condition that the national law in that country implements the main provisions of Union electricity market legislation and that there is an intergovernmental agreement on electricity cooperation between the Union and Switzerland.

5. Subject to the conditions in paragraph 4 above being fulfilled, participation by Switzerland 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 Swiss 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 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 543/2013 <sup>(1)</sup> and Article 2 of Directive 2009/72/EC of the European Parliament and of the Council <sup>(2)</sup> shall apply.

In addition, the following definitions shall apply:

1. ‘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;
2. ‘common grid model’ means a Union-wide data set agreed between various TSOs describing the main characteristic of the power system (generation, loads and grid topology) and rules for changing these characteristics during the capacity calculation process;
3. ‘capacity calculation region’ means the geographic area in which coordinated capacity calculation is applied;
4. ‘scenario’ means the forecasted status of the power system for a given time-frame;
5. ‘net position’ means the netted sum of electricity exports and imports for each market time unit for a bidding zone;
6. ‘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;
7. ‘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;
8. ‘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;

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<sup>(1)</sup> 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).

<sup>(2)</sup> Directive 2009/72/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in electricity and repealing Directive 2003/54/EC (OJ L 211, 14.8.2009, p. 55).

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9. ‘flow-based approach’ means a capacity calculation method in which energy exchanges between bidding zones are limited by power transfer distribution factors and available margins on critical network elements;
10. ‘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;
11. ‘coordinated capacity calculator’ means the entity or entities with the task of calculating transmission capacity, at regional level or above;
12. ‘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;
13. ‘remedial action’ means any measure applied by a TSO or several TSOs, manually or automatically, in order to maintain operational security;
14. ‘reliability margin’ means the reduction of cross-zonal capacity to cover the uncertainties within capacity calculation;
15. ‘market time’ means central European summer time or central European time, whichever is in effect;
16. ‘congestion income’ means the revenues received as a result of capacity allocation;
17. ‘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 allocation constraints;
18. ‘physical congestion’ means any network situation where forecasted or realised power flows violate the thermal limits of the elements of the grid and voltage stability or the angle stability limits of the power system;
19. ‘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;
20. ‘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;

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21. 'order' means an intention to purchase or sell energy or capacity expressed by a market participant subject to specified execution conditions;
22. 'matched orders' means all buy and sell orders matched by the price coupling algorithm or the continuous trade matching algorithm;
23. 'nominated electricity market operator (NEMO)' means an entity designated by the competent authority to perform tasks related to single day-ahead or single intraday coupling;
24. '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;
25. 'trade' means one or more matched orders;
26. 'single day-ahead coupling' means the auctioning process where collected orders are matched and cross-zonal capacity is allocated simultaneously for different bidding zones in the day-ahead market;
27. 'single intraday coupling' means the continuous process where collected orders are matched and cross-zonal capacity is allocated simultaneously for different bidding zones in the intraday market;
28. 'price coupling algorithm' means the algorithm used in single day-ahead coupling for simultaneously matching orders and allocating cross-zonal capacities;
29. 'continuous trading matching algorithm' means the algorithm used in single intraday coupling for matching orders and allocating cross-zonal capacities continuously;
30. 'market coupling operator (MCO) function' means the task of matching orders from the day-ahead and intraday markets for different bidding zones and simultaneously allocating cross-zonal capacities;
31. 'clearing price' means the price determined by matching the highest accepted selling order and the lowest accepted buying order in the electricity market;
32. 'scheduled exchange' means an electricity transfer scheduled between geographic areas, for each market time unit and for a given direction;
33. 'scheduled exchange calculator' means the entity or entities with the task of calculating scheduled exchanges;

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34. 'day-ahead market time-frame' means the time-frame 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;
35. 'day-ahead firmness deadline' means the point in time after which cross-zonal capacity becomes firm;
36. 'day-ahead market gate closure time' means the point in time until which orders are accepted in the day-ahead market;
37. 'intraday market time-frame' means the time-frame of the electricity market after intraday cross-zonal gate opening time and before intraday cross-zonal gate closure time, where for each market time unit, products are traded prior to the delivery of the traded products;
38. '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;
39. '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;
40. 'capacity management module' means a system containing up-to-date information on available cross-zonal capacity for the purpose of allocating intra-day cross-zonal capacity;
41. 'non-standard intraday product' means a product for continuous intraday coupling not for constant energy delivery or for a period exceeding one market time unit 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 start-up costs;
42. 'central counter party' means the entity or entities 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;
43. 'shipping agent' means the entity or entities with the task of transferring net positions between different central counter parties;
44. 'firmness' means a guarantee that cross-zonal capacity rights will remain unchanged and that a compensation is paid if they are nevertheless changed;

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45. ‘*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;
46. ‘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**

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 fair and 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 four months after the entry into force of this Regulation to perform the single day-ahead and/or intraday 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. Except where Article 5(1) applies, Member States shall allow applications for designation at least annually.

3. Unless otherwise provided by Member States, regulatory authorities shall be the designating authority, responsible for NEMO designation, monitoring of compliance with the designation criteria and, in the case of national legal monopolies, the approval of NEMO fees or the methodology to calculate NEMO fees. Member States may provide that authorities other than the regulatory authorities be the designating authority. In these circumstances Member States shall ensure that the designating authority has the same rights and obligations as the regulatory authorities in order to effectively carry out its tasks.

4. The designating authority shall assess whether NEMO 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 the designating authority is not the regulatory authority, 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. NEMO designations shall only be refused where the designation criteria in Article 6 are not met or in accordance with Article 5(1).

5. 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. The designating authorities shall monitor all NEMOs performing single day-ahead and/or intra-day coupling within their Member State. In accordance with Article 19 of Regulation (EC) No 714/2009 the designating authorities shall ensure compliance with this Regulation by all NEMOs performing single day-ahead and/or intra-day coupling within their Member State, regardless of where the NEMOs were designated. The authorities in charge of NEMO designation, monitoring and enforcement shall exchange all information necessary for an efficient supervision of NEMO activities.

A designated NEMO must notify the designating authority of another Member State if it proposes to perform single day-ahead or intraday coupling in that Member State two months before commencing operation.

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6. By way of exception to paragraph 5 of this Article, a Member State may refuse the trading services by a NEMO designated in another Member State if:

- (a) a national legal monopoly for day-ahead and intraday trading services exists in the Member State or bidding zone of the Member State where delivery takes place in accordance with Article 5(1); or
- (b) the Member State where delivery takes place can establish that there are technical obstacles to delivery into that Member State of electricity purchased on day-ahead and intraday markets using NEMOs designated in another Member State linked to the need to ensure the objectives of this Regulation are met while maintaining operational security; or
- (c) the trading rules in the Member State of delivery are not compatible with the delivery into that Member State of electricity purchased on the basis of day-ahead and intraday trading services provided by a NEMO designated in another Member State; or
- (d) the NEMO is a national legal monopoly in accordance with Article 5 in the Member State where it is designated.

7. In case of a decision to refuse day-ahead and/or intraday trading services with delivery in another Member State, the Member State of delivery shall notify its decision to the NEMO and to the designating authority of the Member State where the NEMO is designated, as well as to the Agency and the Commission. The refusal shall be duly justified. In the cases set out in subparagraphs 6(b) and 6(c), the decision to refuse trading services with delivery in another Member State shall also set out how and by when the technical obstacles to trading can be overcome or the domestic trading rules can be made compatible with trading services with delivery in another Member State. The designating authority of the Member State refusing the trading services shall investigate the decision and publish an opinion on how to remove the obstacles to the trading services or how to make the trading services and the trading rules compatible.

8. The Member State where the NEMO has been designated shall ensure that designation is revoked if the NEMO fails to maintain compliance with the criteria in Article 6 and is not able to restore compliance within six months of being notified of such failure by the designating authority. If the regulatory authority is not responsible for designation and monitoring, they shall be consulted on the revocation. The designating authority shall also notify the designating authority of the other Member States in which that NEMO is active of its failure to maintain compliance at the same time it notifies the NEMO.

9. If a designating authority of a Member State finds that a NEMO active but not designated in its country fails to maintain compliance with the criteria in Article 6 with respect to its activities in this country, it must notify the NEMO of its non-compliance. If the NEMO does not restore compliance within three months of being notified, the designating authority can suspend the right to offer intraday and day-ahead trading services in this Member State until such time as the NEMO restores compliance. The designating authority shall notify the designating authority of the Member State in which the NEMO is designated, the Agency and the Commission.

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10. The designating authority shall inform the Agency of the designation and revocation of NEMOs. The Agency shall maintain a list of designated NEMOs, their status and where they operate 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 which excludes the designation of more than one NEMO already exists in a Member State or Member State's bidding zone at the time of the entry into force of this Regulation, the Member State concerned must notify the Commission within two months after entry into force of this regulation and 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 national authority shall fix or approve the NEMO 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(6), 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. For the purposes of this regulation, a national legal monopoly is deemed to exist where national law expressly provides that no more than one entity within a Member State or Member State bidding zone can carry out day-ahead and intraday trading services.

3. 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 or for the continued refusal of a Member State to allow cross-border trading by a NEMO designated in another Member State, the Commission may consider appropriate legislative or other appropriate measures to further increase competition and trade between and within Member States. The Commission shall also include an assessment in the report evaluating the governance of single day-ahead and intraday coupling established by this Regulation, with particular emphasis on the transparency of MCO functions carried jointly by the NEMOs. On the basis of that report, and if the Commission deems that there is ambiguity in carrying out the monopolistic MCO functions and other NEMO tasks, the Commission may consider appropriate legislative or other appropriate measures to further increase transparency and efficient functioning of single day-ahead and intraday coupling.

**▼B***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 contracted or contracts adequate resources for common, coordinated and compliant operation of single day-ahead and/or 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 and shall in its internal accounting keep separate accounts for MCO functions and other activities in order to prevent cross-subsidisation;
  - (d) it shall have an adequate level of business separation from other market participants;
  - (e) if designated as a national legal monopoly for day-ahead and intraday trading services in a Member State, it shall not use the fees in Article 5(1) to finance its day-ahead or intraday activities in a Member State other than the one where these fees are collected;
  - (f) it shall be able to treat all market participants in a non-discriminatory way;
  - (g) it shall have appropriate market surveillance arrangements in place;
  - (h) it shall have in place appropriate transparency and confidentiality agreements with market participants and the TSOs;
  - (i) it shall be able to provide the necessary clearing and settlement services;
  - (j) it shall be able to put in place the necessary communication systems and routines for coordinating with the TSOs of the Member State.
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 to perform in cooperation with TSOs single day-ahead and intraday coupling. Their tasks shall include receiving orders from market participants, having overall responsibility for matching and allocating orders in accordance with the single day-ahead and intraday coupling results, publishing prices and settling and clearing the contracts resulting from the trades according to relevant participant agreements and regulations.

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With regard to single day-ahead and intraday coupling, NEMOs shall in particular be responsible for the following tasks:

- (a) implementing the MCO functions set out in paragraph 2 in coordination with other NEMOs;
- (b) establishing collectively the requirements for the single day-ahead and 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 36 and 37;
- (c) determining maximum and minimum prices in accordance with Articles 41 and 54;
- (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 40 and 53;
- (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 48 and 60;
- (f) informing the market participants on the results of their orders in accordance with Articles 48 and 60;
- (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 68(3);
- (h) establishing jointly with relevant NEMOs and TSOs back-up procedures for national or regional market operation in accordance with Article 36(3) if no results are available from the MCO functions in accordance with Article 39(2), taking account of fallback procedures provided for in Article 44;
- (i) jointly providing single day-ahead and intraday coupling cost forecasts and cost information to competent regulatory authorities and TSOs where NEMO costs for establishing, amending and operating single day-ahead and intraday coupling are to be covered by the concerned TSOs' contribution in accordance with Articles 75 to 77 and Article 80;
- (j) Where applicable, in accordance with Article 45 and 57, coordinate with TSOs to establish arrangements concerning more than one NEMO within a bidding zone and perform single day-ahead and/or intraday coupling in line with the approved arrangements.

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 and intraday coupling in accordance with Articles 36 and 51;
- (b) processing input data on cross-zonal capacity and allocation constraints provided by coordinated capacity calculators in accordance with Articles 46 and 58;

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- (c) operating the price coupling and continuous trading matching algorithms in accordance with Articles 48 and 60;
- (d) validating and sending single day-ahead and intraday coupling results to the NEMOs in accordance with Articles 48 and 60.

3. By eight 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 in paragraph 2.

4. Cooperation between NEMOs shall be strictly limited to what is necessary for the efficient and secure design, implementation and operation of single day-ahead and intraday coupling. 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 12 months after entry into force of this Regulation, the Agency shall report to the Commission whether progress in establishing and performing single day-ahead or intraday coupling is satisfactory.

The Agency may assess the effectiveness and efficiency of establishment and performance 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 and intraday coupling.

6. If NEMOs fail to submit a plan in accordance with Article 7(3) to establish the MCO functions referred to in paragraph 2 of this Article for either the intraday or the day-ahead market time-frames, the Commission may, in accordance with Article 9(4), 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 and intraday coupling.

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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 37(1)(a);
  - (b) jointly validate the matching algorithms against the requirements referred to in point (a) of this paragraph in accordance with Article 37(4);
  - (c) establish and perform capacity calculation in accordance with Articles 14 to 30;
  - (d) where necessary, establish cross zonal capacity allocation and other arrangements in accordance with Articles 45 and 57;
  - (e) calculate and send cross zonal capacities and allocation constraints in accordance with Articles 46 and 58;
  - (f) verify single day-ahead coupling results in terms of validated cross-zonal capacities and allocation constraints in accordance with Articles 48(2) and 52;
  - (g) where required, establish scheduled exchange calculators for calculating and publishing scheduled exchanges on borders between bidding zones in accordance with Articles 49 and 56;
  - (h) respect the results from single day-ahead and intraday coupling calculated in accordance with Article 39 and Article 52;
  - (i) establish and operate fallback procedures as appropriate for capacity allocation in accordance with Article 44;
  - (j) propose the intraday cross-zonal gate opening and intraday cross-zonal gate closure times in accordance with Article 59;
  - (k) share congestion income in accordance with the methodology jointly developed in accordance with Article 73;
  - (l) where so agreed, act as shipping agents transferring net positions in accordance with Article 68(6).

**▼ M1***Article 9***Adoption of terms and conditions or methodologies**

1. TSOs and NEMOs shall develop the terms and conditions or methodologies required by this Regulation and submit them for approval to the Agency or the competent regulatory authorities within the respective deadlines set out in this Regulation. In exceptional circumstances, notably in cases where a deadline cannot be met due to circumstances external to the sphere of TSOs or NEMOs, the deadlines for terms and conditions or methodologies may be prolonged by the Agency in procedures pursuant to paragraph 6, jointly by all competent regulatory authorities in procedures pursuant to paragraph 7, and by the competent regulatory authority in procedures pursuant to paragraph 8.

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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 the ENTSO for Electricity, and all NEMOs shall regularly inform the competent regulatory authorities and the Agency about the progress of developing those terms and conditions or methodologies.

2. Where TSOs or NEMOs deciding on proposals for terms and conditions or methodologies listed in paragraph 6 are not able to reach an agreement, they shall decide by qualified majority voting. The qualified majority shall be reached within each of the respective voting classes of TSOs and NEMOs. A qualified majority for proposals listed in paragraph 6 shall require the following majority:

- (a) TSOs or NEMOs representing at least 55 % of the Member States; and
- (b) TSOs or NEMOs representing Member States comprising at least 65 % of the population of the Union.

A blocking minority for decisions on proposals for terms and conditions or methodologies listed in paragraph 6 shall include TSOs or NEMOs representing at least four Member States, failing of which the qualified majority shall be deemed attained.

For TSO decisions on proposals for terms and conditions or methodologies listed in paragraph 6, one vote shall be attributed per Member State. If there is more than one TSO in the territory of a Member State, the Member State shall allocate the voting powers among the TSOs.

For NEMOs deciding on proposals for terms and conditions or methodologies listed in paragraph 6, one vote shall be attributed per Member State. Each NEMO shall have a number of votes equal to the number of Member States where it is designated. If more than one NEMO is designated in the territory of a Member State, the Member State shall allocate the voting powers among the NEMOs, taking into account their respective volume of transacted electricity in that particular Member State in the preceding financial year.

3. Except for Article 43(1), Article 44, Article 56(1), Article 63 and Article 74(1), where TSOs deciding on proposals for terms and conditions or methodologies listed in paragraph (7) are not able to reach an agreement and where the regions concerned are composed of more than five Member States, they shall decide by qualified majority voting. The qualified majority shall be reached within each of the respective voting classes of TSOs and NEMOs. A qualified majority for proposals for terms and conditions or methodologies listed in paragraph 7 shall require the following majority:

- (a) TSOs representing at least 72 % of the Member States concerned; and
- (b) TSOs representing Member States comprising at least 65 % of the population of the concerned region.

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A blocking minority for decisions on proposals for terms and conditions or methodologies listed in paragraph 7 shall include at least the minimum number of TSOs representing more than 35 % of the population of the participating Member States, plus TSOs representing at least one additional Member State concerned, failing of which the qualified majority shall be deemed attained.

TSOs deciding on proposals for terms and conditions or methodologies listed in paragraph 7 in relation to regions composed of five Member States or less shall decide by consensus.

For TSO decisions on proposals for terms and conditions or methodologies listed in paragraph 7, one vote shall be attributed per Member State. If there is more than one TSO in the territory of a Member State, the Member State shall allocate the voting powers among the TSOs.

NEMOs deciding on proposals for terms and conditions or methodologies listed in paragraph 7 shall decide by consensus.

4. If TSOs or NEMOs fail to submit an initial or amended proposal for terms and conditions or methodologies to the competent regulatory authorities or the Agency in accordance with paragraphs 6 to 8 or 12 within the deadlines set out in this Regulation, they shall provide the competent regulatory authorities and the Agency with the relevant drafts of the proposals for the terms and conditions or methodologies, and explain what has prevented an agreement. The Agency, all competent regulatory authorities jointly, or the competent regulatory authority shall take the appropriate steps for the adoption of the required terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8 respectively, for instance by requesting amendments or revising and completing the drafts pursuant to this paragraph, including where no drafts have been submitted, and approve them.

5. Each regulatory authority or where applicable the Agency, as the case may be, 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 6, 7 and 8. Before approving the terms and conditions or methodologies, the Agency or the competent regulatory authorities shall revise the proposals where necessary, after consulting the respective TSOs or NEMOs, in order to ensure that they are in line with the purpose of this Regulation and contribute to market integration, non-discrimination, effective competition and the proper functioning of the market.

6. The proposals for the following terms and conditions or methodologies and any amendments thereof shall be subject to approval by the Agency:

- (a) the plan on joint performance of MCO functions in accordance with Article 7(3);
- (b) the capacity calculation regions in accordance with Article 15(1);
- (c) the generation and load data provision methodology in accordance with Article 16(1);

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- (d) the common grid model methodology in accordance with Article 17(1);
- (e) the proposal for a harmonised capacity calculation methodology in accordance with Article 21(4);
- (f) back-up methodology in accordance with Article 36(3);
- (g) the algorithm submitted by NEMOs in accordance with Article 37(5), including the TSOs' and NEMOs' sets of requirements for algorithm development in accordance with Article 37(1);
- (h) products that can be taken into account by NEMOs in the single day-ahead and intraday coupling process in accordance with Articles 40 and 53;
- (i) the maximum and minimum prices in accordance with Articles 41(1) and 54(2);
- (j) the intraday capacity pricing methodology to be developed in accordance with Article 55(1);
- (k) the intraday cross-zonal gate opening and intraday cross-zonal gate closure times in accordance with Article 59(1);
- (l) the day-ahead firmness deadline in accordance with Article 69;
- (m) the congestion income distribution methodology in accordance with Article 73(1).

7. The proposals for the following terms and conditions or methodologies and any amendments thereof shall be subject to approval by all regulatory authorities of the concerned region:

- (a) the common capacity calculation methodology in accordance with Article 20(2);
- (b) decisions on the introduction and postponement of flow-based calculation in accordance with Article 20(2) to (6) and on exemptions in accordance with Article 20(7);
- (c) the methodology for coordinated redispatching and countertrading in accordance with Article 35(1);
- (d) the common methodologies for the calculation of scheduled exchanges in accordance with Articles 43(1) and 56(1);
- (e) the fallback procedures in accordance with Article 44;
- (f) complementary regional auctions in accordance with Article 63(1);
- (g) the conditions for the provision of explicit allocation in accordance with Article 64(2);

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(h) the redispatching or countertrading cost sharing methodology in accordance with Article 74(1).

8. The following terms and conditions or methodologies and any amendments thereof shall be subject to individual approval by each regulatory authority or other competent authority of the Member States concerned:

(a) where applicable, NEMO designation and revocation or suspension of designation in accordance with Article 4(2), (8) and (9);

(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);

(c) proposals of individual TSOs for a review of the bidding zone configuration in accordance with Article 32(1)(d);

(d) where applicable, the proposal for cross-zonal capacity allocation and other arrangements in accordance with Articles 45 and 57;

(e) capacity allocation and congestion management costs in accordance with Articles 75 to 79;

(f) if applicable, cost sharing of regional costs of single day-ahead and intraday coupling in accordance with Article 80(4).

9. The proposal for terms and conditions or methodologies shall include a proposed timescale for their implementation and a description of their expected impact on the objectives of this Regulation. Proposals for terms and conditions or methodologies subject to the approval by several regulatory authorities in accordance with paragraph 7 shall be submitted to the Agency within 1 week of their submission to regulatory authorities. Proposals for terms and conditions or methodologies subject to the approval by one regulatory authority in accordance with paragraph 8 may be submitted to the Agency within 1 month of their submission at the discretion of the regulatory authority while they shall be submitted upon the Agency's request for information purposes in accordance with Article 3 paragraph 2 of the Regulation (EU) 2019/942 if the Agency considers the proposal to have a cross-border impact. Upon request by the competent regulatory authorities, the Agency shall issue an opinion within 3 months on the proposals for terms and conditions or methodologies.

10. Where the approval of the terms and conditions or methodologies in accordance with paragraph 7 or the amendment in accordance with paragraph 12 requires a decision by more than one regulatory authority, the competent regulatory authorities shall consult and closely cooperate and coordinate with each other in order to reach an agreement. Where applicable, the competent regulatory authorities shall take into account the opinion of the Agency. Regulatory authorities or, where competent, the Agency shall take decisions concerning the submitted terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, within 6 months following the receipt of the terms and conditions or

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methodologies by the Agency or the regulatory authority or, where applicable, by the last regulatory authority concerned. The period shall begin on the day following that on which the proposal was submitted to the Agency in accordance with paragraph 6, to the last regulatory authority concerned in accordance with paragraph 7 or, where applicable, to the regulatory authority in accordance with paragraph 8.

11. Where the regulatory authorities have not been able to reach agreement within the period referred to in paragraph 10, or upon their joint request, or upon the Agency's request according to the third subparagraph of Article 5(3) of Regulation (EU) 2019/942, the Agency shall adopt a decision concerning the submitted proposals for terms and conditions or methodologies within 6 months, in accordance with Article 5(3) and the second subparagraph of Article 6(10) of Regulation (EU) 2019/942.

12. In the event that the Agency, or all competent regulatory authorities jointly, or the competent regulatory authority request an amendment to approve the terms and conditions or methodologies submitted in accordance with paragraphs 6, 7 and 8 respectively, the relevant TSOs or NEMOs shall submit a proposal for amended terms and conditions or methodologies for approval within 2 months following the request from the Agency or the competent regulatory authorities or the competent regulatory authority. The Agency or the competent regulatory authorities or the competent regulatory authority shall decide on the amended terms and conditions or methodologies within 2 months following their submission. Where the competent regulatory authorities have not been able to reach an agreement on terms and conditions or methodologies pursuant to paragraph 7 within the 2-month deadline, or upon their joint request, or upon the Agency's request according to the third subparagraph of Article 5(3) of Regulation (EU) 2019/942, the Agency shall adopt a decision concerning the amended terms and conditions or methodologies within 6 months, in accordance with Article 5(3) and the second subparagraph of Article 6(10) of Regulation (EU) 2019/942. If the relevant TSOs or NEMOs fail to submit a proposal for amended terms and conditions or methodologies, the procedure provided for in paragraph 4 of this Article shall apply.

13. The Agency, or all competent regulatory authorities jointly, or the competent regulatory authority, where they are responsible for the adoption of terms and conditions or methodologies in accordance with paragraphs 6, 7 and 8, may respectively request proposals for amendments of those terms and conditions or methodologies and determine a deadline for the submission of those proposals. TSOs or NEMOs responsible for developing a proposal for terms and conditions or methodologies may propose amendments to regulatory authorities and the Agency.

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 12 and approved in accordance with the procedure set out in this Article.

14. TSOs and NEMOs responsible for establishing the terms and conditions or methodologies in accordance with this Regulation shall publish them on the internet after approval by the Agency or 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 13.

**▼ B***Article 10***Day-to-day management of the single day-ahead and intraday coupling**

TSOs and NEMOs shall jointly organise the day-to-day management of the single day-ahead and intraday coupling. They shall meet regularly to discuss and decide on day-to-day operational issues. TSOs and NEMOs shall invite the Agency and the Commission as observers to these meetings and shall publish summary minutes of the meetings.

*Article 11***Stakeholder involvement**

The Agency, in close cooperation with ENTSO for Electricity, shall organise stakeholder involvement regarding single day-ahead and intraday coupling and other aspects of the implementation of this Regulation. This shall include regular meetings with stakeholders to identify problems and propose improvements notably related to the single day-ahead and intraday coupling. This shall not replace the stakeholder consultations in accordance with Article 12.

*Article 12***Consultation**

1. TSOs and NEMOs responsible for submitting proposals for terms and conditions or methodologies or their amendments in accordance with this Regulation shall consult stakeholders, including the relevant authorities of each Member State, on the draft proposals for terms and conditions or methodologies where explicitly set out in this Regulation. 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.

**▼B***Article 13***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, 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 14***Capacity calculation time-frames**

1. All TSOs shall calculate cross-zonal capacity for at least the following time-frames:
  - (a) day-ahead, for the day-ahead market;
  - (b) intraday, for the intraday market.
2. For the day-ahead market time-frame, individual values for cross-zonal capacity for each day-ahead market time unit shall be calculated. For the intraday market time-frame, individual values for cross-zonal capacity for each remaining intraday market time unit shall be calculated.

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3. For the day-ahead market time-frame, the capacity calculation shall be based on the latest available information. The information update for the day-ahead market time-frame 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 time-frame based on the latest available information. The frequency of this recalculation shall take into consideration efficiency and operational security.

*Article 15***Capacity calculation regions**

1. By three months 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 12.

2. The proposal referred to in paragraph 1 shall define the bidding zone borders attributed to TSOs who are members of each capacity calculation region. The following requirements shall be met:

- (a) it shall take into consideration the regions specified in point 3(2) of Annex I 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) at least those TSOs shall be assigned to all capacity calculation regions in which they have 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 participate in 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.

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## Section 2

**The common grid model***Article 16***Generation and load data provision methodology**

1. By 10 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 12. 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.

**▼B***Article 17***Common grid model methodology**

1. By 10 months after the entering into force of this Regulation all TSOs shall jointly develop a proposal for a common grid model methodology. The proposal shall be subject to consultation in accordance with Article 12.
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 18;
  - (b) a definition of individual grid models in accordance with Article 19;
  - (c) a description of the process for merging individual grid models to form the common grid model.

*Article 18***Scenarios**

1. All TSOs shall jointly develop common scenarios for each capacity calculation time-frame referred to in Article 14(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 market time unit shall be developed both for the day-ahead and the intraday capacity calculation time-frames.
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 19***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 18(3); or

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- (b) each TSO in the bidding zone shall provide an individual grid model for its control area, including interconnections, provided that the sum of net positions in the control areas, including interconnections, covering the bidding zone complies with Article 18(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 that are used in regional operational security analysis for the concerned time-frame.
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 20***Introduction of flow-based capacity calculation methodology**

1. For the day-ahead market time-frame and intraday market time-frame the approach used in the common capacity calculation methodologies shall be a flow-based approach, except where the requirement under paragraph 7 is met.
2. No later than 10 months after the approval of the proposal for a capacity calculation region in accordance with Article 15(1), all TSOs in each capacity calculation region shall submit a proposal for a common coordinated capacity calculation methodology within the respective region. The proposal shall be subject to consultation in accordance with Article 12. The proposal for the capacity calculation methodology within regions pursuant to this paragraph in capacity calculation regions based on the ‘North-West Europe’ (‘NWE’) and ‘Central Eastern Europe’ (‘CEE’) as defined in points (b), and (d) of point 3.2 of Annex I to Regulation (EC) No 714/2009 as well as in regions referred to in paragraph 3 and 4, shall be complemented with a common framework for coordination and compatibility of flow-based methodologies across regions to be developed in accordance with paragraph 5.

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3. The TSOs from the capacity calculation region where Italy, as defined in point (c) of point 3.2 of Annex I to Regulation (EC) No 714/2009, is included, may extend the deadline without prejudice to the obligation in paragraph 1 for submitting the proposal for a common coordinated capacity calculation methodology using flow-based approach for the respective region pursuant to paragraph 2 up to six months after Switzerland joins the single day-ahead coupling. The proposal does not have to include bidding zone borders within Italy and between Italy and Greece.

4. No later than six months after at least all South East Europe Energy Community Contracting Parties participate in the single day-ahead coupling, the TSOs from at least Croatia, Romania, Bulgaria and Greece shall jointly submit a proposal to introduce a common capacity calculation methodology using the flow-based approach for the day-ahead and intraday market time-frame. The proposal shall provide for an implementation date of the common capacity calculation methodology using the flow-based approach of no longer than two years after the participation of all SEE Energy Community Contracting Parties in the single day-ahead coupling. The TSOs from Member States which have borders with other regions are encouraged to join the initiatives to implement a common flow-based capacity calculation methodology with these regions.

5. At the time when two or more adjacent capacity calculation regions in the same synchronous area implement a capacity calculation methodology using the flow-based approach for the day-ahead or the intraday market time-frame, they shall be considered as one region for this purpose and the TSOs from this region shall submit within six months a proposal for applying a common capacity calculation methodology using the flow-based approach for the day-ahead or intraday market time-frame. The proposal shall provide for an implementation date of the common cross regional capacity calculation methodology of no longer than 12 months after the implementation of the flow-based approach in these regions for the methodology for the day-ahead market time-frame, and 18 months for the methodology for the intraday time-frame. The timelines indicated in this paragraph may be adapted in accordance with paragraph 6.

The methodology in the two capacity calculation regions which have initiated developing a common capacity calculation methodology may be implemented first before developing a common capacity calculation methodology with any further capacity calculation region.

6. If the TSOs concerned are able to demonstrate that the application of common flow-based methodologies in accordance with paragraphs 4 and 5 would not yet be more efficient assuming the same level of operational security, they may jointly request the competent regulatory authorities to postpone the deadlines.

7. TSOs may jointly request the competent regulatory authorities to apply the coordinated net transmission capacity approach in regions and bidding zone borders other than those referred to in paragraphs 2 to 4, if the TSOs concerned are able to demonstrate that the application of the capacity calculation methodology using the flow-based approach would not yet be more efficient compared to the coordinated net transmission capacity approach and assuming the same level of operational security in the concerned region.

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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 implementing a proposal for changing their capacity calculation approach.

9. 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 the interaction between cross-zonal capacities and cross-zonal exchanges between bidding zones.

*Article 21***Capacity calculation methodology**

1. The proposal for a common capacity calculation methodology for a capacity calculation region determined in accordance with Article 20(2) shall include at least the following items for each capacity calculation time-frame:

- (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 22;
  - (ii) the methodologies for determining operational security limits, contingencies relevant to capacity calculation and allocation constraints that may be applied in accordance with Article 23;
  - (iii) the methodology for determining the generation shift keys in accordance with Article 24;
  - (iv) the methodology for determining remedial actions to be considered in capacity calculation 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 actions in accordance with Article 25;
  - (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;

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- (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 26.

2. For the intraday capacity calculation time-frame, the capacity calculation methodology shall also state the frequency at which capacity will be reassessed in accordance with Article 14(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. All TSOs in each capacity calculation region shall, as far as possible, use harmonised capacity calculation inputs. By 31 December 2020, all regions shall use a harmonised capacity calculation methodology which shall in particular provide for a harmonised capacity calculation methodology for the flow-based and for the coordinated net transmission capacity approach. The harmonisation of capacity calculation methodology shall be subject to an efficiency assessment concerning the harmonisation of the flow-based methodologies and the coordinated net transmission capacity methodologies that provide for the same level of operational security. All TSOs shall submit the assessment with a proposal for the transition towards a harmonised capacity calculation methodology to all regulatory authorities within 12 months after at least two capacity calculation regions have implemented common capacity calculation methodology in accordance with Article 20(5).

*Article 22***Reliability margin methodology**

1. The proposal for a common capacity calculation methodology shall include 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.

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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 control areas, to maintain a constant frequency;
  - (b) uncertainties which could affect capacity calculation and which could occur between the capacity calculation time-frame 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 time-frame and real time, and the remedial actions available after capacity calculation.
5. For each capacity calculation time-frame, 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 23***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 common 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 can only 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.

**▼ B***Article 24***Generation shift keys methodology**

1. The proposal for a common capacity calculation methodology shall include a proposal for a methodology to determine a common generation shift key for each bidding zone and scenario developed in accordance with Article 18.
  
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 25***Methodology for remedial actions in capacity calculation**

1. Each TSO within each capacity calculation region shall individually define the available remedial 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 actions to be taken into account in capacity calculation and their actual application in real time operation.
  
3. To enable remedial actions to be taken into account in capacity calculation, all TSOs in each capacity calculation region shall agree on the use of remedial actions that require the action of more than one TSO.
  
4. Each TSO shall ensure that remedial actions are taken into account in capacity calculation under the condition that the available remedial actions remaining after calculation, taken together with the reliability margin referred to in Article 22, are sufficient to ensure operational security.
  
5. Each TSO shall take into account remedial actions without costs in capacity calculation.
  
6. Each TSO shall ensure that the remedial actions to be taken into account in capacity calculation are the same for all capacity calculation time-frames, taking into account their technical availabilities for each capacity calculation time-frame.

**▼B***Article 26***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 27 to 31.
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 21 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 27***General provisions**

1. No later than six months after the decision on the generation and load data provision methodology referred to in Article 16 and the common grid model methodology referred to in Article 17, 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 20 and 21, 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 31.

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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 actions taken into account in capacity calculation;
  - (d) the application of the methodologies for determining generation shift keys, critical network elements and contingencies referred to in Articles 22 to 24.

*Article 28***Creation of a common grid model**

1. For each capacity calculation time-frame referred to in Article 14(1), each generator or load unit subject to Article 16 shall provide the data specified in the generation and load data provision methodology to the TSO responsible for the respective control area within the specified deadlines.
2. Each generator or load unit providing information pursuant to Article 16(3) shall deliver the most reliable set of estimations practicable.
3. For each capacity calculation time-frame, each TSO shall establish the individual grid model for each scenario in accordance with Article 19, 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 time-frame a single, Union-wide common grid model shall be created for each scenario as set out in Article 18 by merging inputs from all TSOs applying the capacity calculation process as set out in paragraph 3 of this Article.

*Article 29***Regional calculation of cross-zonal capacity**

1. For each capacity calculation time-frame, 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 actions, reliability margins, allocation constraints and previously allocated cross-zonal capacity.

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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 28(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) ignore those critical network elements that are not significantly influenced by the changes in bidding zone net positions according to the methodology set out in Article 21; 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 21(1)(a)(i) and (ii), and take into account previously allocated cross-zonal capacity in accordance with Article 21(1)(b)(iii).
4. Each coordinated capacity calculator shall optimise cross-zonal capacity using available remedial actions taken into account in capacity calculation in accordance with Article 21(1)(a)(iv).
5. Each coordinated capacity calculator shall apply the sharing rules established in accordance with Article 21(1)(b)(vi).
6. Each coordinated capacity calculator shall respect the mathematical description of the applied capacity calculation approach established in accordance with Article 21(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 21(1)(b)(ii);

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- (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 actions to be considered in capacity calculation in accordance with Article 25.

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 actions taken into account in capacity calculation in accordance with Article 25;
- (c) adjust maximum power exchange, applying rules for avoiding undue discrimination between internal and cross-zonal exchanges in accordance with Article 21(1)(b)(ii);
- (d) apply the rules set out in accordance with Article 21(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 31, 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

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- (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 21(1)(c).

*Article 30***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 26.
2. Each TSO shall send its capacity validation and allocation constraints 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 and allocation constraints for the purposes of allocating capacity in accordance with Articles 46 and 58.

*Section 5***Biennial report on capacity calculation and allocation***Article 31***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 time-frame;
  - (d) quality indicators for the information used for the capacity calculation;
  - (e) where appropriate, proposed measures to improve capacity calculation;

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- (f) for regions where the coordinated net transmission capacity approach is applied, an analysis of whether the conditions specified in Article 20(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 15(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.

*CHAPTER 2****Bidding zone configuration****Article 32***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 34(7);
  - (b) several regulatory authorities, pursuant to a recommendation from the Agency in accordance with Article 34;
  - (c) TSOs of a capacity calculation region, together with all concerned TSOs whose control areas, including interconnectors, are within the geographic area in which the bidding zone configuration shall be assessed in accordance with paragraph 2(a);
  - (d) one single regulatory authority or TSO with the approval of its competent regulatory authority, for the bidding zones inside the TSO's control area, if the bidding zone configuration has negligible impact on neighbouring TSOs' control areas, including interconnectors, and the review of bidding zone configuration is necessary to improve efficiency, or to maintain operational security;
  - (e) Member States in a capacity calculation region.

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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 area 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 control area of the relevant TSO, including interconnectors;
- (b) the TSO of the relevant control 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. The review process shall consist of two steps.

- (a) In the first step, the TSOs participating in a review of bidding zone configuration shall develop the methodology and assumptions that will be used in the review process and propose alternative bidding zone configurations for the assessment.

The proposal on methodology and assumptions and alternative bidding zone configuration shall be submitted to the participating regulatory authorities, which shall be able to require coordinated amendments within three months.

- (b) In the second step, the TSOs participating in a review of bidding zone configuration shall:
  - (i) assess and compare the current bidding zone configuration and each alternative bidding zone configuration using the criteria specified in Article 33;
  - (ii) hold a consultation in accordance with Article 12 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' control areas;

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- (iii) submit a joint proposal to maintain or amend the bidding zone configuration to the participating Member States and the participating regulatory authorities within 15 months of the decision to launch a review.
- (c) On receiving the joint proposal to maintain or to amend the bidding zone configuration in accordance with point (iii) above, the participating Member States or, where provided by Member States, the regulatory authorities shall within six months reach an agreement on the proposal to maintain or amend the bidding zone configuration.
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 33***Criteria for reviewing bidding zone configurations**

1. If a review of bidding zone configuration is carried out in accordance with Article 32, 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;
    - (iii) transaction and transition costs, including the cost of amending existing contractual obligations incurred by market participants, NEMOs and TSOs;
    - (iv) the cost of building new infrastructure which may relieve existing congestion;

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- (v) the need to ensure that the market outcome is feasible without the need for extensive application of economically inefficient remedial actions;
  - (vi) 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;
  - (vii) 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 time-frames;
  - (iii) the need for each generation and load unit to belong to only one bidding zone for each market time unit;
  - (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 32 shall include scenarios which take into account a range of likely infrastructure developments throughout the period of 10 years starting from the year following the year in which the decision to launch the review was taken.

*Article 34***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 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;

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- (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 time-frame.
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 13, ENTSO for Electricity 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 launch a review of an existing bidding zone configuration in accordance with Article 32(1).

*CHAPTER 3****Redispatching and countertrading****Article 35***Coordinated redispatching and countertrading**

1. Within 16 months after the regulatory approval on capacity calculation regions referred to in Article 15, 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 12.
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 the physical congestion fall mainly outside their control area or not. The methodology for coordinated redispatching and countertrading shall address the fact that its application may significantly influence flows outside the TSO's control area.
3. Each TSO may redispatch all available generation units and loads in accordance with the appropriate mechanisms and agreements applicable to its control area, including interconnectors.

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By 26 months after the regulatory approval of capacity calculation regions, all TSOs in each capacity calculation region shall develop a report, subject to consultation in accordance with Article 12, assessing the progressive coordination and harmonisation of those mechanisms and agreements and including proposals. The report shall be submitted to their respective regulatory authorities for their assessment. The proposals in the report 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 time-frame;  
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 36*

#### **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 39 and 52 respectively.

3. By 18 months after the entry into force of this Regulation, all NEMOs shall in cooperation with TSOs develop a proposal for a back-up methodology to comply with the obligations set out in Articles 39 and 52 respectively. The proposal for a methodology shall be subject to consultation in accordance with Article 12.

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4. Where possible, NEMOs shall use already agreed solutions to efficiently implement the objectives of this Regulation.

*Article 37***Algorithm development**

1. By eight 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 functions in accordance with Article 7(1)(b).
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 12.
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 18 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 and submit the report to the Agency. If requested by the Agency, the review shall then be repeated every second year.

**▼B***CHAPTER 5**Single day-ahead coupling*

## Section 1

**The price coupling algorithm***Article 38***Objectives of the price coupling algorithm**

1. The price coupling algorithm shall produce the results set out in Article 39(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 apply it to a larger or smaller number of bidding zones.

*Article 39***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 23(3);
  - (b) cross-zonal capacity results validated in accordance with Article 30;
  - (c) orders submitted in accordance with Article 40.
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 information which enables the execution status of orders to be determined.

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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 40***Products accommodated**

1. No later than 18 months after the entry into force of this Regulation NEMOs shall submit a joint proposal concerning products that can be taken into account in the single day-ahead coupling. NEMOs shall ensure that orders resulting from these products 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 resulting from these products 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 12:

- (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 41***Maximum and minimum prices**

1. By 18 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 clearing prices to be applied in all bidding zones which participate in single day-ahead coupling. The proposal shall take into account an estimation of the value of lost load.

The proposal shall be subject to consultation in accordance with Article 12.

2. All NEMOs shall submit the proposal to the regulatory authorities for approval.

Where a Member State has provided that an authority other than the national regulatory authority has the power to approve maximum and minimum clearing prices at the national level, the regulatory authority shall consult the proposal with the relevant authority as regards its impact on national markets.

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

*Article 42***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 43***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 develop a proposal for a common methodology for this calculation. The proposal shall be subject to consultation in accordance with Article 12.
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)(g) 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 by the regulatory authorities of the concerned region of the proposal 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 44***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 develop a proposal for 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 12.

**▼B***Article 45***Arrangements concerning more than one NEMO in one bidding zone and for interconnectors which are not operated by certified TSOs**

1. TSOs in bidding zones where more than one NEMO is designated and/or offers trading services, or where interconnectors which are not operated by TSOs certified according to Article 3 of Regulation (EC) No 714/2009 exist, shall develop a proposal for cross-zonal capacity allocation and other necessary arrangements for such bidding zones in cooperation with concerned TSOs, NEMOs and operators of interconnectors who are not certified as TSOs to ensure that the relevant NEMOs and interconnectors provide the necessary data and financial coverage for such arrangements. These arrangements must allow additional TSOs and NEMOs to join these arrangements.
2. The proposal shall be submitted to the relevant national regulatory authorities for approval within 4 months after more than one NEMO has been designated and/or allowed to offer trading services in a bidding zone or if a new interconnector is not operated by a certified TSO. For existing interconnectors which are not operated by certified TSOs the proposal shall be submitted within four months after entry into force of this Regulation.

*Section 2***The single day-ahead coupling process***Article 46***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 47***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.

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2. The day-ahead market gate closure time in each bidding zone shall be noon market time day-ahead. TSOs or NEMOs in the region based on the CEE region or its neighbouring countries may set a different gate closure time until this region has joined single day-ahead coupling.
3. Market participants shall submit all orders to the relevant NEMOs before day-ahead market gate closure time, in accordance with Articles 39 and 40.
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 37(5).
5. Orders matched in single day-ahead coupling shall be considered firm.
6. MCO functions shall ensure anonymity of submitted orders.

*Article 48***Delivery of results**

1. No later than by the time specified by all TSOs in the requirements set out in Article 37(1)(a), all NEMOs performing MCO functions 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 39(2)(a) and (b);
  - (b) to all NEMOs, for the results specified in Article 39(2)(c).
2. Each TSO shall verify that the single day-ahead coupling results of the price coupling algorithm referred to in Article 39(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 39(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 49***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 43.

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2. Each scheduled exchange calculator shall notify relevant NEMOs, central counter parties, shipping agents and TSOs of the agreed scheduled exchanges.

*Article 50***Initiation of fallback procedures**

1. In the event that all NEMOs performing MCO functions are unable to deliver part or all of the results of the price coupling algorithm by the time specified in Article 37(1)(a), the fallback procedures established in accordance with Article 44 shall apply.

2. In cases where there is a risk that all NEMOs performing MCO functions 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 performing MCO functions 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 51***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 time-frame 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 58(1);
- (c) respects the cross-zonal capacity provided in accordance with Article 58(1);

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(d) respects the requirements for the delivery of results set out in Article 60;

(e) is repeatable and scalable.

2. The continuous trading matching algorithm shall produce the results provided for in Article 52 and correspond to the product capabilities and functionalities set out in Article 53.

*Article 52***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 bidding zone and market time unit within the intraday market.

2. All NEMOs shall ensure the accuracy and efficiency of results produced by the 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 58(2).

*Article 53***Products accommodated**

1. No later than 18 months after the entry into force of this Regulation NEMOs shall submit a joint proposal concerning products that can be taken into account in the single intraday coupling. NEMOs shall ensure that all orders resulting from these products 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 orders resulting from these 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 12:

(a) market participants, to ensure that available products reflect their needs;

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- (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.
5. All NEMOs shall amend the products if needed pursuant to the results of the consultation referred to in paragraph 4.

*Article 54***Maximum and minimum prices**

1. By 18 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 clearing prices to be applied in all bidding zones which participate in single intraday coupling. The proposal shall take into account an estimation of the value of lost load.

The proposal shall be subject to consultation in accordance with Article 12.

2. All NEMOs shall submit the proposal to all regulatory authorities for approval. Where a Member State has provided that an authority other than the national regulatory authority has the power to approve maximum and minimum clearing prices at the national level, the regulatory authority shall consult the proposal with the relevant authority as regards its impact on national markets.

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

*Article 55***Pricing of intraday capacity**

1. Once applied, the single methodology for pricing intraday cross-zonal capacity developed in accordance with Article 55(3) 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 develop a proposal for a single methodology for pricing intraday cross-zonal capacity. The proposal shall be subject to consultation in accordance with Article 12.

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.

**▼B***Article 56***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 develop a proposal for a common methodology for this calculation.

The proposal shall be subject to consultation in accordance with Article 12.

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 52(1)(b).

4. No later than two years after the approval by the regulatory authorities of the concerned region of the proposal 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.

*Article 57***Arrangements concerning more than one NEMO in one bidding zone and for interconnectors which are not operated by certified TSOs**

1. TSOs in bidding zones where more than one NEMO is designated and/or offers trading services, or where interconnectors which are not operated by TSOs certified according to Article 3 of Regulation (EC) No 714/2009 exist, shall develop a proposal for cross-zonal capacity allocation and other necessary arrangements for such bidding zones in cooperation with concerned TSOs, NEMOs and operators of interconnectors who are not certified as TSOs to ensure that the relevant NEMOs and interconnectors provide the necessary data and financial coverage for such arrangements. These arrangements must allow additional TSOs and NEMOs to join these arrangements.

2. The proposal shall be submitted for approval by the relevant national regulatory authorities within 4 months of more than one NEMO being designated and/or allowed to offer trading services in a bidding zone or if a new interconnector is not operated by a certified TSO. For existing interconnectors which are not operated by certified TSOs the proposal shall be submitted within 4 months after entry into force of this Regulation.

**Section 2****The single intraday coupling process***Article 58***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.

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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 59***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 12.

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 time-frame 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.

**▼B***Article 60***Delivery of results**

1. All NEMOs performing MCO functions shall deliver the continuous trading matching algorithm results:
  - (a) to all other NEMOs, for results on the execution status per trade specified in Article 52(1)(a);
  - (b) to all TSOs and scheduled exchange calculators, for results single net positions specified in Article 52(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 NEMOs 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 68 and 73(3) can be undertaken.

*Article 61***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 56.
2. Each scheduled exchange calculator shall notify the relevant NEMOs, central counter parties, shipping agents, and TSOs of the agreed scheduled exchanges.

*Article 62***Publication of market information**

1. As soon as the orders are matched, each NEMO shall publish for relevant market participants at least the status of execution of orders and prices per trade produced by the continuous trading matching algorithm in accordance with Article 52(1)(a).

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2. Each NEMO shall ensure that information on aggregated executed volumes and prices is made publicly available in an easily accessible format for at least 5 years. The information to be published shall be proposed by all NEMOS within the proposal for continuous trading matching algorithm pursuant to Article 37(5).

*Article 63***Complementary regional auctions**

1. By 18 months after the entry into force of this Regulation, the relevant NEMOs and TSOs on bidding zone borders may jointly 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 12.

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 51. 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 55(3) but it shall nevertheless meet the principles provided for in Article 55(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;

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- (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 64***Provisions relating to explicit allocation**

1. Where jointly requested by the regulatory authorities of the Member States of each of the bidding zone borders concerned, the TSOs concerned shall also provide explicit allocation, in addition to implicit allocation, that is to say, capacity allocation separate from the electricity trade, via the capacity management module on bidding zone borders.

2. The TSOs on the bidding zone borders concerned shall jointly develop a proposal on the conditions that shall be fulfilled by market participants to participate in explicit allocation. The proposal shall be subject to the joint approval by the regulatory authorities of the Member States of each of the bidding zone borders 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 65***Removal of explicit allocation**

1. The NEMOs concerned shall cooperate closely with the TSOs concerned and shall consult market participants in accordance with Article 12 in order to translate the needs of market participants linked to explicit capacity allocation rights into non-standard intraday products.

2. Prior to deciding on the removal of explicit allocation, the regulatory authorities of the Member States of each of the bidding zone borders concerned shall jointly organise a consultation to assess whether the proposed non-standard intraday products meet the market participants' needs for intraday trading.

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3. The competent regulatory authorities of the Member States of each of the bidding zone borders concerned shall jointly approve the introduced non-standard products and the removal of explicit allocation.

*Article 66***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 67***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 68***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.

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4. Such exchanges shall take into account:
  - (a) net positions produced in accordance with Articles 39(2)(b) and 52(1)(b);
  - (b) scheduled exchanges calculated in accordance with Articles 49 and 61.
5. Each central counter party shall ensure that for each market time unit:
  - (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 surplus bidding zones and the sum of energy transferred into all deficit 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 46 to 48 and from the single intraday coupling specified in Articles 58 to 60.
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 69***Proposal for day-ahead firmness deadline**

By 16 months after the entry into force of this Regulation, all TSOs shall develop a common proposal for a single day-ahead firmness deadline, 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 12.

**▼B***Article 70***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 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 46(2) 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 71***Firmness of intraday capacity**

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

*Article 72***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 allocated cross-zonal 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 time-frame.
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;

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- (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.
5. Where a Member State has so provided, upon request by the TSO concerned the national regulatory authority shall assess whether an event qualifies as *force majeure*.

## TITLE III

## COSTS

## CHAPTER 1

***Congestion income distribution methodology for single day-ahead and intraday coupling****Article 73***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 time-frames;
  - (e) establish arrangements to share congestion income deriving from transmission assets owned by parties other than TSOs.

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3. TSOs shall distribute congestion incomes in accordance with the methodology in paragraph 1 as soon as reasonably practicable and no later than one week after the congestion incomes have been transferred in accordance with Article 68(8).

*CHAPTER 2****Redispatching and countertrading cost sharing methodology for single day-ahead and intraday coupling****Article 74***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 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 20 and 21;
  - (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 20 and 21;
  - (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 actions with costs;
  - (c) a mechanism to assess the impact of the remedial actions, based on operational security and economic criteria;

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- (d) a process allowing improvement of the remedial 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 actions and incentives to invest 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 73;
    - (ii) the inter-TSO compensation mechanism, as set out in Article 13 of Regulation (EC) No 714/2009 and Commission Regulation (EU) No 838/2010 <sup>(1)</sup>;
  - (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 time-frames; and
  - (i) comply with the principles of transparency and non-discrimination.
7. By 31 December 2018, all TSOs of each capacity calculation region shall further harmonise as far as possible between the regions the redispatching and countertrading cost sharing methodologies applied within their respective capacity calculation region.

*CHAPTER 3**Capacity allocation and congestion management cost recovery**Article 75***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 74 and Articles 76 to 79, 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.

<sup>(1)</sup> 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).

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2. Member States' share of the common costs referred to in Article 80(2)(a), regional costs referred to in Article 80(2)(b) and national costs referred to in Article 80(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 76***Costs of establishing, amending and operating single day-ahead and intraday coupling**

1. All NEMOs shall bear the following costs:

- (a) common, regional and national costs of establishing, updating or further developing the price coupling algorithm and single day-ahead coupling;
- (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 approval by the relevant regulatory authorities. In such cases, within two months of receiving a forecast from the NEMOs concerned, each TSO shall be entitled to provide a cost contribution proposal to the relevant regulatory authority for approval.

3. 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 the costs are reasonable and proportionate, through national agreements with the competent regulatory authority.

*Article 77***Clearing and settlement costs**

1. All costs incurred by central counter parties and shipping agents shall be recoverable by means of fees or other appropriate mechanisms if they are reasonable and proportionate.

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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 national regulatory authorities.

*Article 78***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 79***Costs of ensuring firmness**

The costs of ensuring firmness in accordance with Articles 70(2) and 71 shall be borne by the relevant TSOs, to the extent possible in accordance with Article 16(6)(a) of Regulation (EC) No 714/2009. These costs shall include the costs from compensation mechanisms associated with ensuring the firmness of cross-zonal capacities as well as the costs of redispatching, countertrading and imbalance associated with compensating market participants.

*Article 80***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 intraday coupling are explained in detail. This report shall be published by the Agency taking due account of sensitive commercial information. Costs directly related to single day-ahead and intraday coupling shall be clearly and separately identified and auditable. The report shall also provide full details of contributions made to NEMO costs by TSOs in accordance with Article 76(2).

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 intraday coupling;

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- (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 intraday 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. NEMOs and TSOs cooperating in a certain region shall jointly agree on a proposal for the sharing of regional costs in accordance with paragraph 2(b). The proposal shall then be individually approved by the competent national authorities of each of the Member States in the region. NEMOs and TSOs cooperating in a certain region may alternatively use the cost sharing arrangements set out in paragraph 3.

5. The cost sharing principles shall apply to costs incurred from the entry into force of this Regulation. This is without prejudice to existing solutions used for the development of single day-ahead and intraday coupling and costs incurred prior to the entry into force of this Regulation shall be shared among the NEMOs and TSOs based on the existing agreements governing such solutions.

## TITLE IV

## DELEGATION OF TASKS AND MONITORING

*Article 81***Delegation of tasks**

1. A TSO or NEMO may delegate all or part of any task assigned to it under this Regulation to one or more third parties in the case the third party can carry out the respective function at least 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.

**▼ B***Article 82***Monitoring of the implementation of single day-ahead and intraday coupling**

1. The entity or entities performing the MCO functions shall be monitored by the regulatory authorities or relevant authorities of the territory where they are located. Other regulatory authorities or relevant authorities, and the Agency, shall contribute to the monitoring where adequate. The regulatory authorities or relevant authorities primarily responsible for monitoring a NEMO and the MCO functions 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 intraday coupling in accordance with Article 38 of Directive 2009/72/EC.

2. Monitoring of the implementation of 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 31(1);
- (c) the efficiency of current bidding zone configuration in coordination with the Agency in accordance with Article 34;
- (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 37(6);
- (e) the effectiveness of the criterion concerning the estimation of the value of lost load, in accordance with Articles 41(1) and 54(1); and
- (f) the review of the methodology for calculating scheduled exchanges resulting from single day-ahead coupling in accordance with Article 43(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.

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6. NEMOs, market participants and other relevant organisations regarding single day-ahead and intraday coupling shall, at the joint request of the Agency and the ENTSO for Electricity, submit to the ENTSO for Electricity the information required for monitoring in accordance with paragraph 2 and 4, except for information already obtained by the regulatory authorities, the Agency or the ENTSO for Electricity in the context of their respective implementation monitoring tasks.

## TITLE V

## TRANSITIONAL AND FINAL PROVISIONS

*Article 83***Transitional provisions for Ireland and Northern Ireland**

1. Except for Articles 4, 5 and 6 and participation in the development of terms and conditions or methodologies, for which the respective deadlines shall apply, the requirements of this Regulation shall not apply in Ireland and Northern Ireland until 31 December 2017.
2. From the date of the entry into force of this Regulation until 31 December 2017, Ireland and Northern Ireland shall implement preparatory transitional arrangements. Those transitional arrangements shall:
  - (a) facilitate the transition to full implementation of and full compliance with this Regulation, and include all necessary preparatory measures for full implementation of and full compliance with this Regulation, by 31 December 2017;
  - (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 time-frame;
    - (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 time-frame.
  - (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;

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- (g) be subject to a consultation process, 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 84***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.