



Final Draft Framework Guidelines on Capacity Allocation and Congestion Management for Electricity

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INFORMATION PAGE

Abstract

This document (Ref. E10-ENM-20-03_2011-02-03) presents ERGEG's final draft Framework Guidelines on Capacity Allocation and Congestion Management for electricity. The final Framework Guidelines are intended as input to ACER, which becomes fully operational on 3 March 2011.

The FG outlines the principles for capacity calculation, day-ahead market, forward market and intraday market in Europe. The FG deals with the integration, coordination and harmonisation of congestion management regimes, insofar as such harmonisation is necessary in order to facilitate electricity trade within the EU in compliance with EU energy legislation.

Related Documents

- [1] "ERGEG Framework Guidelines on Capacity Allocation and Congestion Management for electricity – Evaluation of Responses to the Public Consultation," 11 February 2011, Ref. E10-ENM-20-03a
- [2] "ERGEG Framework Guidelines on Capacity Allocation and Congestion Management for electricity – Initial Impact Assessment", 8 September 2010, Ref. E10-ENM-20-04, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_CONSULT/CLOSED%20PUBLIC%20CONSULTATIONS/ELECTRICITY/draft%20Framework%20Guideline%20CACM%20Electricity/CD/E10-ENM-20-04_FG-CACM_IIA_8-Sept-2010.pdf
- [3] "Implementing the 3rd Package: next steps", CEER/ERGEG, 18 June 2009, Ref. C09-GA-52-06a, http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_ERGEG_PAPERS/Cross-Sectoral/2009/C09-GA-52-06a_Implementing_3rdpackage_18-Jun-09.pdf
- [4] 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. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0055:0093:EN:PDF>
- [5] Regulation (EC) No 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0001:0014:EN:PDF>
- [6] Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003. <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:211:0015:0035:EN:PDF>

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Scope

These Framework Guidelines (FG) apply to Capacity Allocation and Congestion Management (CACM hereafter) between the zones in the EU electricity market. The FG deal with the integration, coordination and harmonisation of the congestion management regimes, insofar as such harmonisation is necessary in order to facilitate electricity trade within the EU in compliance with Electricity Directive 2009/72/EC (Directive) and Electricity Regulation (EC) 714/2009 (Regulation), including also the relevant aspects from the existing Congestion Management (CM) Guidelines from the Annex of the Regulation (CM Guidelines).

The FG complement the CM Guidelines where necessary and specify the detailed aspects which need to be implemented in the related Network Codes (NC). Moreover, the relevant provisions from the CM Guidelines have been referred to where needed.

These FG serve as the basis for the development of corresponding NC, according to Article 8.6.(g) of the Regulation. Moreover, the FG also makes use of ongoing discussions on future Governance Comitology Guidelines.

The NC developed by ENTSO-E on the basis of these FG will amend, repeal or, where applicable and necessary, also replace the relevant sections of the CM Guidelines.

The NC developed according to these FG will be applied by electricity Transmission System Operators (TSOs) taking into account possible public service obligations and without prejudice to the regulatory regime for cross-border issues pursuant to Article 38 of the Directive and of the responsibilities and powers of regulatory authorities established according to Article 37 paragraph 6 of the Directive.

The FGs were elaborated based on the related Initial Impact Assessment (IIA) [2] and the selected preferred policy options from this IIA. The IIA shall be read in parallel with these FG. Moreover, the chapters of the FG are in line with the corresponding chapters of the IIA. Finally, relevant background information, problem definition and objectives of this initiative, policy options assessment and preferred policy options, as well as a glossary, abbreviation and references are also described in detail in the IIA [2].

The NC prepared according to these FG will be evaluated by the Agency for the Cooperation of Energy Regulators - ACER (Agency), taking into account the degree of compliance with the CM Guidelines and the fulfilment of the objectives: maintaining security of supply, supporting competition within and functioning of the internal market in electricity and cross-border trade including delivering benefits to customers and facilitating targets for penetration of renewable generation.

These FG do not address the integration of electricity balancing markets even though coordination between balancing and the intraday market will be essential. Electricity balancing markets integration is a subject of another FG and related codes.

In addition, these FG do not address the requirements on transparency and information management in the electricity market – these requirements are a subject of dedicated comitology guidelines on fundamental electricity data transparency, under development by the European Commission, ERGEG and stakeholders. Nevertheless, on the basis of the answers received to the public consultation, ERGEG acknowledges the need for additional requirements concerning

the transparency of redispatching and countertrade as this information goes beyond the provisions currently foreseen in ERGEG's advice for the guidelines on transparency.

Structure

The FG on CACM start with a section on the governance in the elaboration of the NC:

1. NC Governance

The subsequent chapters are structured according to the objectives and related policy options for achievement of these objectives, described in detail in the IIA [2].

The overarching objective of these FG is to ensure an optimal use of power generation plants and transmission infrastructure across Europe.

2. Objective #1: To Ensure Optimal Use of Transmission Network Capacity in a Coordinated Way

- 2.1 Objective #1-1: Capacity Calculation

- 2.2 Objective #1-2: Definition of Zones for CACM

3. Objective #2: To Achieve Reliable Prices and Liquidity in the Day-Ahead Market
4. Objective #3: To Achieve Efficient Forward Market
5. Objective #4: To Achieve Efficient Intraday Market

Finally, the General requirements and provisions are defined in a separate chapter:

6. General Issues, Requirements and Provisions

1 NC Governance

1.1 Development of Network Codes (NC)

- 1.1.1 In line with the provisions in Regulation (EC) 714/2009 (Regulation), on preparing the NC, all relevant documents and minutes of meetings related to the consultations and preparation work shall be made publicly available by ENTSO-E.
 - 1.1.2 Before submitting the draft NC, ENTSO-E shall indicate how the observations received during the consultation have been taken into consideration. It shall provide reasons where observations have not been taken into account.

1.2 Entry into force of the NC and roadmap

- 1.2.1 The NC shall contain a description and a roadmap (time plan) for the implementation of its provisions, starting from the date of entry into force of the NC.
- 1.2.2 This roadmap shall set out each significant step of the implementation of the provisions of the FG and NC on capacity calculation, definition of zones, day-ahead, forward and intraday markets.
- 1.2.3 For each significant step in the roadmap, ENTSO-E shall provide a clear understanding of the options, if any, and associated costs and benefits.
- 1.2.4 This roadmap shall provide for the implementation of the provisions of the FG and NC by 2014.

1.3 Amendments to the NC

- 1.3.1 In line with the requirements in Articles 7(1) through 7(3) of the Regulation on amendments to the network codes, the NC shall contain the specification of the amendment procedure taking into account that:
- 1.3.2 Duly justified draft amendments to the NC may be proposed to the Agency by any stakeholder who is likely to have an interest in that network code, including ENTSO-E, NRAs, TSOs, system users and consumers. The Agency may also propose amendments on its own initiative.
- 1.3.3 The Agency shall consult all the stakeholders on received proposals. Following that process, the Agency may make reasoned proposals for amendments to the Commission, explaining how such proposals are consistent with the objectives of the NC.
- 1.3.4 The Commission may adopt, taking account of the Agency's proposals, amendments to the NC.

1.4 Monitoring

- 1.4.1 ENTSO-E shall set out a procedure to review periodically the NC.
- 1.4.2 NRAs and the Agency, in accordance with Article 9 of the Regulation and Article 6 of Regulation 713/2009 establishing the Agency, shall monitor and analyse the implementation of the NC and its effect on the harmonisation of applicable rules aimed at facilitating non-discrimination, effective competition and the efficient functioning of the market integration.
- 1.4.3 ENTSO-E and/or TSOs shall make available all information and analysis required by the Agency and / or NRAs to fulfil their tasks. In particular, the CACM NC shall further ensure that the data required for market monitoring is provided to the NRAs.

1.5 Definitions and references

- 1.5.1 The NC shall contain a section with a glossary and definition of words and expressions adopted.

2 Ensure Optimal Use of Transmission Network Capacity in a Coordinated Way

Capacity calculation and the definition of zones for CACM are essential elements for ensuring optimal use of transmission network capacity in a coordinated way.

2.1 Objective #1-1: Capacity Calculation

Capacity calculation methods

- 2.1.1 The CACM NC shall foresee that the TSOs define and implement either a Flow-Based (FB) method or an available transfer capacity (ATC) method for capacity calculation. Both methods shall make use of the information on relevant generation and consumption units (i.e. “locational information”), through a detailed common grid model¹ and ensure compliance with legal provisions for transparency.

The FB method for capacity calculation makes use of locational information in the grid model for the assessment of system security at the allocation stage without arbitrary assignment of capacity per border, and thus allows an efficient utilisation of the network. This method is therefore considered to be better than the ATC method for short term capacity calculation in cases where transmission networks are highly meshed and interdependencies between the interconnections are high (e.g. ENTSO-E Continental Europe, most notably the Central West -CWE and Central East – CEE regions).

- 2.1.2 Both methods (FB and ATC) shall be thoroughly described in the Network Code.
- 2.1.3 The CACM code(s) shall foresee that the practical usage of the FB calculation and allocation starts only after market participants have been allowed sufficient time for their preparation and for a smooth transition to the new arrangement.

Provided that it is done in a coordinated way, ATC is considered as an acceptable method for short term capacity calculation in less meshed networks, such as the Nordic power system or possibly the cases of interconnections between the large peninsulas or islands in Europe. However, both methods must be applied with due caution as it is essential to ensure that the trade of electricity within one zone and/or between zones is managed accordingly to minimise any adverse impacts on other zones.

- 2.1.4 Long-term calculation methodologies shall be fully compatible with the short term capacity calculation, taking into account the actual impact of commercial transactions on the physical grid situation and the fact that basic input data only has limited reliability because of changing market situations.
- 2.1.5 In cases where different capacity calculation methods are applied at different interconnections of one same zone, the CACM code(s) shall provide for ENTSO-E to develop the necessary methods and implement the required solution in order to ensure technical and operational feasibility, neither reducing social welfare nor operational security in the network.
- 2.1.6 The capacity calculation method (including the approach to assess the required security margins and to split capacity between interdependent borders) shall be approved by relevant NRAs.

¹ Please refer to the glossary of the CACM IIA for the definition of the common grid model.

Capacity calculation process

- 2.1.7 The CACM code(s) shall ensure that the process for determining the common grid model / common base case does not discriminate between exchanges internal to a zone and cross-border (cross-zonal) exchanges.
- 2.1.8 The CACM code(s) shall ensure that the description of the capacity calculation method is made publicly available by the TSOs and that it contains a detailed and clear explanation of the elaboration of the common grid model, of the security assessment methods and the level of security margins and where applicable, of the critical branches² taken into account.
- 2.1.9 In order to cope with variations in network use during the day, available maximum flows (for the FB method) or available transmission capacity (for the ATC method) shall be reassessed sufficiently often within the intraday time frame, in accordance with the timing of the allocation method. This is particularly important in order to take into account the most timely and relevant information from possible outages, variable generation (e.g. wind, solar) or to consider accordingly other events which occur close to real-time.

Common grid model and base case

- 2.1.10 The CACM code(s) shall foresee that the TSOs establish a common grid model suitable for community-wide application. As a minimum, the common grid model shall cover an area appropriate for the capacity calculation method used, at least the synchronous area. The common grid model shall include a detailed description of the transmission network including the location of generation units and demand.
- 2.1.11 The CACM code(s) shall foresee that the TSOs update the common grid model and common base case as often as required for a given allocation procedure, with all the data relevant for the respective calculations, such as the expected network topology, generation and demand forecast. The data shall be available to all concerned TSOs and ready for immediate use.

2.2 Objective #1-2: Definition of Zones for CACM

- 2.2.1 A zone shall be defined as a bidding area, i.e. a network area, within which market participants shall submit their bids day-ahead, in intraday and in the longer term time frames. The CACM code(s) shall ensure that, when defining the zones, the TSOs are guided by the principle of overall market efficiency (including all economic, technical and legal aspects of relevance) and the respective network structure and topology. The definition of zones shall further contribute towards correct price signals and support adequate treatment of internal congestion.
- 2.2.2 Zone definitions concern all time frames: long-term, day-ahead and intraday. Moreover, zone delimitations should be coordinated with balancing zones.
- 2.2.3 The TSOs shall propose the delimitation of zones for subsequent review by NRAs. In cases where it can be shown that there is no significant internal congestion within or between control areas, one or several control areas may constitute one zone. All criteria

² Please refer to the CACM IIA for an explanation of critical branches

mentioned and covered in paragraph 2.2.1 and aspects such as system security must be reflected in the proposal and be assessed in a sound and comprehensive substantiation for either the proposed new delimitation or preservation of existing zones. The assessment shall be prepared in a region-wide coordinated way also taking into account possible impact on other zones in the respective region. TSOs shall repeat the assessment when network topology or patterns of generation and load, or local energy situations (deficits or surplus) are significantly changed or if it is necessary to ensure system security. NRAs shall assess the delimitation of zones against the criteria of overall market efficiency. In case a change in the zone delimitation is foreseen, it is of the utmost importance that market participants have sufficient time to prepare.

- 2.2.4 While limiting cross-border capacity to solve internal congestion inside a control area is generally not permitted, if such a situation occurs, then this must be reported transparently. Detailed information on internal and cross-border congestion and limiting constraints (exact location, exact hour of congestion) shall also be reported to the NRAs.
- 2.2.5 The TSOs shall submit every two years, on a regional basis to the responsible NRAs and to the Agency, an analysis of the current zone delimitation based on detailed data on redispatching / countertrade costs and structural congestion. Based on this analysis, the market structure and possible market power issues shall be evaluated and where necessary measures shall be undertaken by the NRAs. The CACM NC shall foresee stable and robust zones over time.

3 Objective #2: To Achieve Reliable Prices and Liquidity in the Day-Ahead Capacity Allocation

Capacity allocation methods for the day-ahead market

- 3.1 The CACM NC shall foresee that TSOs implement capacity allocation on the basis of implicit auctions via a single price coupling algorithm which simultaneously determines volumes and prices in all relevant zones, based on the marginal pricing principle. The implementation shall take into account the role of the power exchanges (PXs)³.
- 3.2 Calculated zone prices will differ only in the case of congestion between the concerned zones. The “single” price coupling algorithm calculates volumes and prices for all bidding areas and for each hour. This means that there can only be one price calculated per bidding area and per time unit. The algorithm shall allow for block bids and any other products that are deemed feasible and suitable.
- 3.3 The CACM code(s) shall ensure that the TSOs and PXs provide all the necessary data to the relevant NRAs, in order to enable all necessary monitoring and regulatory supervision of the day-ahead allocation.

Pricing

³ The function of PX may also be performed by a pool operator.

- 3.4 The price of transmission capacity (congestion) shall correspond to the difference of the day-ahead electricity prices in the corresponding zones.
- 3.5 In addition to congestion pricing, CACM methods for the day-ahead market shall provide the necessary elements for the establishment of price references for the forward market.

Firmness

- 3.6 Reduction of allocated capacity may only be used in emergency situations and force majeure, and when all other means are exhausted (as a last resort measure). Market participants shall not be affected and PXs shall not bear additional costs deriving from such reductions.

4 Objective #3: To Achieve Efficient Forward Market

Capacity allocation methods for the forward market

- 4.1 The objective of long-term transmission rights, physical or financial, is to provide to market participants long-term hedging solutions against congestion costs and the day-ahead congestion pricing, compatible with zone delimitation.
- 4.2 It is within that framework that the CACM code(s) shall foresee that the options for enabling risk hedging for cross-border trading are Financial Transmission Rights (FTR) or Physical Transmission Rights (PTR) with Use-It-Or-Sell-It (UIOSI) unless appropriate cross-border financial hedging is offered in liquid financial markets on both side of an interconnector.
- 4.3 The nature of PTR and FTR in terms of options or obligations should be defined in the respective CACM code(s). The CACM code(s) shall foresee a harmonised set of rules for borders where PTRs with UIOSI are applied and a harmonised set of rules for borders where FTRs are applied.
- 4.4 The CACM code(s) shall provide for a single platform (single point of contact) for the allocation and nomination (in case of PTRs) of long-term transmission rights (PTR and FTR).
- 4.5 PTR shall be options and subject to UIOSI. FTRs may allow for both possibilities (options or obligations). Hybrid solutions, mixing both options on the same border, shall not be implemented.

Time frames, volumes and secondary market with relevance for PTR and FTR

- 4.6 PTR shall be subject to UIOSI at the time of nomination (or equivalent market allocation process), which means as a default the resale of non-nominated rights. TSOs shall give the total financial resale value of capacity (in the case of an explicit auction this is equal to the clearing price of the auction in which the capacity is resold, in the case of an implicit auction this is equal to the day-ahead price differential between the two zones) back to the market players who are the PTR capacity owners.

- 4.7 Volume of long-term capacity rights shall be determined by TSOs in accordance with the technical capabilities of the network and for each long-term time frame. The CACM code(s) shall ensure that the TSOs submit (at least indicative) levels of capacity available for the whole year sufficiently in advance before the yearly allocation takes place. NRAs shall review and approve the volume of yearly capacity rights, as well as the principles for sharing capacity between the different time frames.
- 4.8 In line with the Article 2(12) of the CM Guidelines, the CACM code(s) shall foresee that the TSOs provide a single platform for anonymous secondary trading.

5 Objective #4: To Design Efficient Intraday Market Capacity Allocation

- 5.1 The key feature of the intraday market is to enable market participants to trade energy as close to real-time as possible in order to be balanced. Intraday trading is particularly important to accommodate intermittent generation and unexpected events such as outages.
- 5.2 The CACM code(s) shall set out all necessary provisions for the implementation of a pan-European intraday platform applying an evolution of the continuous implicit trading model, including reliable pricing of intraday transmission capacity reflecting congestion (i.e. in case of scarce of capacity). This should include automatic matching and appropriate block bids and sophisticated products where needed.
- 5.3 Where there is sufficient liquidity or in the case of pool markets with central dispatch, regional auctions may complement the implicit continuous allocation mechanism. Where implemented, implicit auctions should have adequate gate closures to provide necessary flexibility to the market and be coordinated with, and linked to, the pan-European platform.
- 5.4 The CACM code(s) shall ensure that, in case of congestion, the pan-European intraday allocation mechanism facilitates market-based allocation of transmission capacity, including a reliable pricing of cross-zonal intraday capacity, reflecting congestion and the value of the cross-zonal capacity close to real-time. The method for pricing capacity and the allocation of congestion rents shall be subject to regulatory approval.
- 5.5 The process to develop in detail and implement the pan-European target model shall be led by ENTSO-E, include the participation of PXs and the consultation of market parties and be subject to regulatory approval. In particular, regulators will require a good understanding of the options and associated costs and benefits for each significant step in the implementation of the approved intraday roadmap.
- 5.6 To implement the pan-European platform, the CACM code(s) shall require the development of a pan-European shared order book function and a pan-European capacity management module.
- 5.7 The CACM code(s) shall ensure that all cross-zonal intraday capacity is allocated via the pan-European platform and that there is a one-to-one relationship between the pan-European shared order book function and the capacity management module
- 5.8 The capacity management module shall provide a pan-European capacity matrix with up to date and real-time information on available transmission capacity. This capacity

management module needs to be coordinated with the general capacity calculation for other time frames (in particular day-ahead).

- 5.9 The CACM code(s) shall set out a process for TSOs to establish clear rules on the process and timings for the coordinated recalculation and updating of intraday capacity. These rules shall be developed in consultation with market parties and subject to regulatory approval.
- 5.10 The shared order book function shall be provided with the bids on all participating PXs and intraday platforms and real-time information on available transmission capacity. The shared order book function shall include one unique algorithm which performs automatic matching of all bids. The rules for matching and accepting bids shall be developed by ENTSO-E and PXs in consultation with market parties and subject to regulatory review.
- 5.11 The matching rules and algorithm should avoid undue discrimination in matching the different types of intraday products.
- 5.12 Sophisticated products shall be developed by ENTSO-E and PXs in consultation with market parties and subject to regulatory review. The objective of developing sophisticated products is to meet market needs concerning the start of additional generation units in the intraday time frame and to replace explicit access to cross-border intraday capacity for Over-the-Counter (OTC) trades.
- 5.13 Where applicable, until the full implementation of the provisions of the FG and NCs, the capacity management module may provide direct access for bilateral supply (OTC) contracts to the capacity. As a minimum, the price and volume of any OTC contract allocated intraday capacity shall be made transparent.
- 5.14 On borders where OTC access has been allowed, if it is broadly accepted that sophisticated products meet the needs of market parties, they shall replace direct OTC access to the capacity. The removal of direct OTC access shall be subject to consultation with market parties and regulatory approval.
- 5.15 The CACM code(s) shall foresee that the allocated intraday capacity is firm, and that the use of intraday capacity is obligatory when allocated.
- 5.16 Intraday allocation and trade foreseen in the CACM code(s) shall be coordinated by the TSOs with redispatching/countertrade and with (cross-border) balancing markets, while being guided by the principle of overall efficiency.
- 5.17 In order to increase liquidity while taking advantage of all trading possibilities enabled by the transmission system, the intraday mechanism shall avoid market segmentation.
- 5.18 The CACM code(s) shall foresee that efficient arbitrage across time frames is possible but preventing abuse.

6 General Issues, Requirements and Provisions

Time table

- 6.1 The NCs shall define a common time table (including publication of available capacity, gate closure where applicable, publication of results and, when applicable, *ex post* analysis) for day-ahead and intraday time frames respectively.

Force Majeure

- 6.2 A common definition of *force majeure* shall be given in the CACM NCs to be used in all capacity allocation rules (*inter alia* auction rules, market coupling rules, rules for continuous trading).
- 6.3 *Force majeure* shall be defined as any sudden unforeseeable event or situation which:
- is beyond the reasonable control of the claiming party;
 - is not a fault of the claiming party;
 - cannot reasonably be avoided or overcome with reasonable foresight and diligence;
 - cannot be solved by measures which are from a technical, financial and/or economic point of view reasonably possible for the claiming party;
 - makes it impossible for the claiming party to fulfill temporarily or definitively its obligations;
 - has actually happened;
 - is objectively verifiable.
- 6.4 The claiming party, which invokes *force majeure*, shall send the other contractual party, as soon as it is aware or should reasonably have been aware of this event, a Notification describing the nature of the event of *force majeure* and its probable duration.
- 6.5 The obligations of a party subject to the *force majeure*, with the exception of confidentiality obligations, shall be suspended from the beginning of the *force majeure*. Allocated capacity that has been paid for and which becomes subject to a *force majeure* is reimbursed for the period of that *force majeure*. The claiming party can under no circumstances be held responsible or held liable to pay any compensation for damage suffered, due to the non-performance or faulty performance of all or part of its obligations, when such non-performance or faulty performance is due to a *force majeure*. The claiming party shall make every possible effort to limit the consequences and duration of the *force majeure*.
- 6.6 If a *force majeure* lasts for more than a certain amount of time, to be defined in the CACM NCs, either contractual party may terminate contractual relation by sending a registered mail with acknowledgement of receipt, if the event adversely affects the essential obligations of the contractual parties.
- 6.7 TSOs shall make transparent where congestion usually occurs and how, where and when it is physically relieved by enhancing the cross-border network capacity or by adjusting the critical network elements through e.g. new transmission lines.

Cross-border redispatching/countertrade

- 6.8 The CACM NCs shall ensure that TSOs implement coordinated cross-border redispatching/countertrade at least at regional level, with a fair allocation of congestion costs between countries/zones. It shall be coordinated with control-area internal redispatching/countertrade.
- 6.9 The coordination of redispatching/countertrading measures shall be based on the use of a common grid model⁴ and the relevant data shared among all concerned TSOs.
- 6.10 Redispatching shall be conducted on the basis of its efficiency. The CACM NCs shall oblige the TSOs to avoid that the pricing of generation capacity reservation distorts the market and to coordinate capacity reservation conditions.

Capacity products co-existence and firmness

- 6.11 Curtailments of cross-border transactions may only be applied in emergency situations and the CACM NCs shall ensure that the TSOs avoid any discrimination between the different types of commercial exchanges, between the relevant time frames and between exchanges internal to countries and cross-border exchanges. Other measures, such as redispatching and countertrading, shall be considered and the most efficient solution shall be applied.
- 6.12 TSOs shall ensure, on a coordinated basis, that enough redispatching/countertrade means are available for ensuring firmness.
- 6.13 Except in the case of force majeure, capacity holders shall be compensated for any curtailment. Compensation shall be based on the price difference between the concerned zones/countries of the relevant time frame (day-ahead, intraday or balancing).
- 6.14 All nominated capacity shall be firm. Physical firmness is the preferred approach, but financial firmness may be accepted in case of explicit auctions.
- 6.15 The CACM NCs shall define a certain period of time ahead of capacity allocation during which capacity announced for an auction (explicit or implicit) can no longer be changed. This period shall be submitted to regulatory approval.
- 6.16 The CACM NCs shall foresee that capacity which cannot be used as a consequence of a force majeure event shall be reimbursed on the basis of the initial price paid.

⁴ Please refer to the glossary of the CACM IIA for the definition of the common grid model.