

# **Framework Guidelines on Capacity Allocation and Congestion Management for Electricity**

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This Document contains the Framework Guidelines on Capacity Allocation and Congestion Management for Electricity, which the Agency for the Cooperation of Energy Regulators (ACER) has developed, pursuant to Articles 6 of Regulation (EC) No 713/2009 and of Regulation (EC) No 714/2009, on the basis of a request from the European Commission.

### Related Documents

- [1] “EREG Final Draft Framework Guidelines on Capacity Allocation and Congestion Management for Electricity”, 11 February 2011, Ref. E10-ENM-20-03.
- [2] “EREG 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
- [3] “EREG 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](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)
- [4] “Implementing the 3rd Package: next steps”, CEER/EREG, 18 June 2009, Ref. C09-GA-52-06a, [http://www.energy-regulators.eu/portal/page/portal/EER\\_HOME/EER\\_PUBLICATIONS/CEER\\_EREG\\_PAPER\\_S/Cross-Sectoral/2009/C09-GA-52-06a\\_Implementing\\_3rdpackage\\_18-Jun-09.pdf](http://www.energy-regulators.eu/portal/page/portal/EER_HOME/EER_PUBLICATIONS/CEER_EREG_PAPER_S/Cross-Sectoral/2009/C09-GA-52-06a_Implementing_3rdpackage_18-Jun-09.pdf)
- [5] 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>
- [6] 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>
- [7] 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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## **1 General Provisions**

### **1.1 Scope**

These Framework Guidelines aim at setting out clear and objective principles for the development of network codes pursuant to Article 6(6)(g) of Regulation (EC) No 714/2009 (the “Electricity Regulation”)<sup>1</sup>.

The network code(s) adopted according to these Framework Guidelines (the “CACM Network Code(s)”) will apply to Capacity Allocation and Congestion Management (“CACM”) between the zones in the EU electricity market. These Framework Guidelines 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 Directive 2009/72/EC<sup>2</sup> (the “Electricity Directive”) and the Electricity Regulation.

These Framework Guidelines complement, where necessary, the existing Congestion Management Guidelines from the Annex to the Electricity Regulation (the “CM Guidelines”) and specify the detailed aspects which need to be implemented in the CACM Network Code(s), with references to relevant provisions from the CM Guidelines..

The CACM Network Code(s) will amend, where applicable and necessary, the CM Guidelines.

The CACM Network Code(s) 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 Electricity Directive and of the responsibilities and powers of National Regulatory Authorities (NRAs) established according to Article 37 paragraph 6 of the Electricity Directive.

These Framework Guidelines do not address the integration of electricity balancing markets even though coordination between balancing and the intraday market is essential. Electricity balancing market integration will be the subject of separate Framework Guidelines and related network code(s).

In addition, these Framework Guidelines do not address the requirements on transparency and information management in the electricity market. ACER understands that these requirements will be the subject of dedicated Guidelines to be proposed by the European Commission on fundamental electricity data transparency.

The CACM Network Code(s) to be developed by the European Network of Transmission System Operators for Electricity (ENTSO-E) will be evaluated by ACER, taking into account their degree of compliance with the Framework Guidelines and the fulfilment of the following objectives: maintaining security of supply, supporting the completion and functioning of the internal market in electricity and cross-border trade, including delivering benefits to the customers and facilitating the Union's targets for penetration of renewable generation.

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<sup>1</sup> 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.

<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

## **1.2 Implementation of the provisions of the Network Code(s) and transitional arrangements**

The CACM Network Code(s) shall set out deadlines for the implementation, for the different timeframes and across the European Union, of the target model for CACM as defined in these Framework Guidelines, with 2014 as the overall deadline for the completion of the Internal European Market.

The CACM Network Code(s) may provide for transitional arrangements for the day-ahead and the intra-day markets of island systems with central dispatch, as long as these transitional arrangements:

- are justified on the basis of a cost-benefit analysis;
- do not unduly affect other jurisdictions;
- guarantee a reasonable degree of integration with the markets in adjacent jurisdictions;
- do not extend beyond 2016.

The transitional arrangements shall be proposed by the relevant NRA(s) for inclusion by ENTSO-E in the CACM Network Code(s). The NRA(s) shall provide ACER with the information required for assessing that the above conditions are met.

The CACM Network Code(s) may also provide for transitional arrangements allowing:

- regional platform for the allocation and for anonymous secondary trading of long-term transmission rights to operate, as indicated and subject to the conditions specified in Sections 4.1 and 4.2;
- direct explicit access to the intra-day capacity, as indicated and subject to the conditions specified in Section 5;
- alternative compensation arrangements, as indicated and subject to the conditions specified in Section 6.4.

## **1.3 Definitions and references**

The CACM Network Code(s) shall contain a section with a glossary and definition of words and expressions adopted.

## **1.4 Agency involvement**

The CACM Network Codes(s) shall provide that ENTSO-E or TSO(s), as relevant, submit to ACER, without delay, all the relevant documents related to the opening of any approval procedure by NRA(s), as laid down in these Framework Guidelines. The relevant NRA(s) shall inform ACER of the outcome of such procedures. The competences of ACER as defined in Articles 4, 7 and 8 of Regulation (EC) No 713/2009<sup>3</sup> shall remain unaffected.

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<sup>3</sup> 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

## **2 Optimal and Coordinated Use of Transmission Network Capacity**

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

### **2.1 Capacity Calculation**

#### **2.1.1 Capacity calculation methods**

The CACM Network Code(s) shall require the use of either a Flow-Based (FB) method or an Available Transfer Capacity (ATC) method for capacity calculation at each zone border for a given timeframe. Both methods shall make use of locational information on relevant generation and consumption units, through a detailed common grid model and ensure compliance with legal provisions for transparency. Both methods shall be described in the CACM Network Code(s).

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 to be preferred to 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. the ENTSO-E Continental Europe regional group, or the ACER Central West Europe (CWE) and Central East Europe (CEE) regional initiative groups).

The CACM Network Code(s) shall foresee that the practical usage of the FB calculation and allocation starts only after market participants have been consulted and 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 of or between the large peninsulas or islands in Europe.

Both FB and ATC 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 so as to minimise any adverse impacts on other zones.

Long-term capacity calculation methodologies shall be fully compatible with the adopted 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 has only limited reliability because of changing market situations.

In cases where different capacity calculation methods are applied on different borders of the same zone, the CACM Network Code(s) shall thoroughly describe the required solution in order to ensure technical and operational feasibility, neither reducing social welfare nor operational security in the network. In particular, the CACM Network Code(s) shall specify the coordination of ATC and FB methods.

The CACM Network Code(s) shall stipulate that the capacity calculation methods, including the approach to assess the required security margins and to split capacity between interdependent borders, are submitted to the relevant NRAs for approval.

### 2.1.2 Capacity calculation process

The CACM Network Code(s) shall ensure that the process for determining the common grid model and common base case does not discriminate between exchanges internal to a zone and cross-border (cross-zonal) exchanges.

The CACM Network Code(s) shall ensure that the description of the capacity calculation method is made publicly available by the relevant TSOs and that it contains a detailed and clear explanation of the common grid model, of the security assessment methods and the level of security margins and where applicable, of the critical branches taken into account.

The CACM Network Code(s) shall ensure that, 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 other events which occur close to real-time.

### 2.1.3 Common grid model and base case

The CACM Network Code(s) shall require that the TSOs establish one or more common grid models suitable for community-wide application. As a minimum, each common grid model shall cover an area appropriate for the capacity calculation method used, at least the synchronous area. The common grid model(s) shall include a detailed description of the transmission network including the location of generation units and demand.

The CACM Network Code(s) shall require that the relevant TSOs update the common grid model(s) and the 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 Definition of Zones for Capacity Allocation and Congestion Management

The CACM Network Code(s) shall define a zone as a bidding area, i.e. a network area within which market participants submit their energy bids day-ahead, in intraday and in the longer term timeframe. The CACM Network Code(s) shall ensure that, when defining the zones, the TSOs are guided by the principle of overall market efficiency. This includes all economic, technical and legal aspects of relevance, such as, socio economic welfare, liquidity, competition, network structure and topology, planned network reinforcement and redispatching costs. The definition of zones shall further contribute towards correct price signals and support adequate treatment of internal congestion.

Zone definitions concern all timeframes: long-term, day-ahead and intraday. Moreover, zone delimitations should be coordinated with balancing zones.

The CACM Network Code(s) shall provide that TSOs propose the delimitation of zones for subsequent approval by the relevant 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. The above-mentioned market efficiency principle 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. The CACM Network Code(s)

shall envisage that the relevant TSOs 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 be consulted and have sufficient time to prepare.

While limiting cross-border capacity to solve internal congestion inside a control area is generally not permitted, the CACM Network Code(s) shall provide that, if such a situation occurs, it is 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 relevant NRAs.

The CACM Network Code(s) shall require TSOs to 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 by the relevant NRAs and the Agency and, where necessary, measures shall be adopted. The CACM Network Code(s) shall foresee stable and robust zones over time.

### **3 Day-Ahead Capacity Allocation**

#### **3.1 Capacity allocation methods for the day-ahead market**

The CACM Network Code(s) shall foresee that TSOs implement capacity allocation in the day-ahead market 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)<sup>4</sup> and shall require the harmonisation of day-ahead bidding deadlines<sup>5</sup>.

If there is insufficient transmission capacity to enable all requested trades, calculated zonal prices shall differ. The single price coupling algorithm calculates volumes and prices for all bidding areas and for each time unit. This means that there can only be one price calculated per bidding area and per hour<sup>6</sup>. The algorithm shall allow for block bids and any other products that are deemed feasible and appropriate.

#### **3.2 Pricing**

The CACM Network Code(s) shall define the price of transmission capacity between zones (when congestion occurs) as the difference between the corresponding day-ahead zonal electricity prices.

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.

#### **3.3 Firmness**

The CACM Network Code(s) shall provide that reduction of allocated capacity may only be used in emergency situations and *force majeure*, and when all other means are exhausted (reduction of allocated capacity shall be a last resort measure). Market participants shall not be affected and PXs shall not bear additional costs deriving from a reduction in allocated capacity.

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<sup>4</sup> The function of PX may also be performed by a pool operator.

<sup>5</sup> These are the latest times when bids in the day-ahead markets can be submitted.

<sup>6</sup> This is the price at which all electricity is bought and sold in the specific zone and hour.

## **4 Forward Capacity Allocation**

### **4.1 Capacity allocation methods for the forward market**

The objective of long-term transmission rights, physical or financial, is to provide market participants with long-term hedging solutions against congestion costs and the day-ahead congestion pricing, compatible with zone delimitation.

The CACM Network 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.

PTR shall be defined as options and subject to UIOSI. The CACM Network Code(s) shall define the nature of FTR in terms of options or obligations. Hybrid solutions, mixing PTR and FTR on the same border, shall not be permitted. The CACM Network Code(s) shall also 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.

The CACM Network Code(s) shall require that the TSOs provide a single platform (single point of contact) for the allocation of long-term transmission rights (PTR and FTR) at European level. As a transitional arrangement, regional platforms may operate, as long as this does not hamper the improvement and harmonisation of allocation rules. The CACM Network Code(s) shall also foresee greater harmonisation of the nomination rules, deadlines and processes.

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

The CACM Network Code(s) shall require that PTR are subject to the UIOSI requirement at the time of nomination (or equivalent market allocation process), which means, as a default, the resale of non-nominated capacity 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 participants who owned the PTR.

The CACM Network Code(s) shall require that TSOs determine the volume of long-term capacity rights in accordance with the technical capabilities of the network and for each long-term timeframe. The CACM Network Code(s) shall also 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.

In line with the point 2(12) of the CM Guidelines, the CACM Network Code(s) shall foresee that the TSOs provide a single platform for anonymous secondary trading at the European level. As a transitional arrangement regional platforms may operate.

## 5 Intraday Capacity Allocation

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 (re-)balance their position. Intraday trading is particularly important to accommodate intermittent generation and unexpected events such as outages.

The CACM Network Code(s) shall set out all necessary provisions for the implementation of the pan-European intraday target model supporting continuous implicit trading, with reliable pricing of intraday transmission capacity reflecting congestion (i.e. in case of scarce capacity). The method for pricing capacity and the allocation of congestion rents shall be subject to approval by the NRAs concerned. As a transitional measure, direct explicit access to the capacity will also be allowed, subject to the approval by the relevant NRAs and the conditions defined further below.

The CACM Network Code(s) shall define a harmonised gate closure time<sup>7</sup> for intraday cross-zonal trade and ensure that generation scheduling processes are compatible with the intraday target model to facilitate cross-zonal trade.

The CACM Network Code(s) shall also envisage that, where there is sufficient liquidity, regional auctions may complement the implicit continuous allocation mechanism. Where implemented, implicit auctions should have adequate bidding deadlines<sup>8</sup> to provide the necessary flexibility to the market and be coordinated with, and linked to, the pan-European target model.

The process to develop in detail and implement the pan-European target model, including the process to develop the rules for matching and accepting bids in the shared order book, shall be led by ENTSO-E, include the participation of PXs and the consultation of market parties and be subject to NRAs approval. In particular, NRAs require a good understanding of the options and associated costs and benefits for each significant step in the implementation of the approved intraday roadmap.

To implement the pan-European target model, the CACM Network Code(s) shall require the development of a pan-European shared order book function and a pan-European capacity management module.

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

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 timeframes (in particular day-ahead).

The CACM Network 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 approval by the relevant NRAs.

The CACM Network Code(s) shall ensure that the shared order book function is provided with the bids submitted to all participating PXs and intraday platforms and real-time information on

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<sup>7</sup> This is the latest time when electricity can be traded for a specific delivery time.

<sup>8</sup> These are the latest times when bids in the intra-day auctions can be submitted.

available transmission capacity. The shared order book function shall include one unique algorithm which performs automatic matching of all bids, including appropriate block bids. The CACM Network Code(s) shall specify requirements regarding efficient capacity allocation and pricing. The rules for matching and accepting bids shall meet these requirements, avoid undue discrimination in matching the different types of intraday products and be subject to approval by the relevant NRAs.

Where needed, sophisticated products shall be developed by PXs in close cooperation with TSOs and in consultation with market parties and be subject to approval by the NRAs concerned. These sophisticated products shall meet the requirements set by the CACM Network Code(s). 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 OTC trades.

The CACM Network Code(s) shall foresee that the allocated intraday capacity is firm, and that the use of intraday capacity is obligatory when allocated.

Intraday allocation and trade foreseen in the CACM Network Code(s) shall be coordinated by the affected TSOs with redispatching/countertrade and with (cross-border) balancing markets, while being guided by the principle of overall efficiency.

In order to increase liquidity while taking advantage of all trading possibilities enabled by the transmission system, the intraday mechanism shall avoid market segmentation.

The CACM Network Code(s) shall foresee that efficient arbitrage across timeframes is possible but shall prevent abuse.

Where applicable, as a transitional arrangement, the capacity management module may provide direct explicit access (e.g. for bilateral supply OTC contracts) to the capacity. As a minimum, the price and volume of the intraday capacity allocated to OTC contracts shall be made public. The price and volume of each OTC contract allocated intraday capacity shall be made available to the concerned NRAs. On borders where explicit access has been allowed, if sophisticated products meet the needs of market parties, they shall replace direct explicit access to the capacity. The removal of direct explicit access for each border shall be subject to consultation with market parties and then approval of the relevant NRAs.

## **6 General Issues, Requirements and Provisions**

### **6.1 Timetable**

The CACM Network Code(s) shall define a common timetable (including publication of available capacity, gate closure where applicable, publication of results and, when applicable, ex post analysis) for day-ahead and intraday timeframes respectively.

### **6.2 Force Majeure**

A common definition of *force majeure* shall be given in the CACM Network Code(s) to be used in all capacity allocation rules (including auction rules, market coupling rules, rules for continuous trading).

*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.

The CACM Network Code(s) shall envisage that the claiming party which invokes *force majeure* sends 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.

The CACM Network Code(s) shall provide that the obligations of a party subject to the *force majeure*, with the exception of confidentiality obligations, are 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*.

The CACM Network Code(s) shall require each TSO to publish information on 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.

### **6.3 Cross-border redispatching/countertrade**

The CACM Network Code(s) 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.

The coordination of redispatching/countertrading measures shall be based on the use of a common grid model<sup>9</sup> and the relevant data shared among all concerned TSOs.

Redispatching shall be conducted on the basis of its efficiency. The CACM Network Code(s) shall oblige each TSO to ensure that the pricing of generation capacity reservation does not distort the market and to coordinate capacity reservation conditions.

#### **6.4 Capacity products co-existence and firmness**

The CACM Network Code(s) shall provide that curtailments of cross-zonal transactions is applied only in emergency situations and ensure that the affected 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 before curtailing capacities and the most efficient solution shall be applied.

Congestion rents shall be used, *inter alia*, for guaranteeing the firmness of allocated capacity rights, in particular through the activation of coordinated/countertrade actions.

TSOs shall ensure, on a coordinated basis, that enough redispatching/countertrade means are available for ensuring firmness.

Capacities shall be firm. After the nomination deadline, physical firmness is the preferred approach, but financial firmness may be accepted in case of explicit auctions.

The CACM Network Code(s) shall require that, except in the case of *force majeure*, capacity holders shall be compensated for any curtailment. Compensation shall generally be equal to the price difference between the concerned zones in the relevant time frame.

As a derogation to the general compensation rule, on some borders and subject to approval by the relevant NRAs, caps on the compensation may be introduced:

- in the case of curtailment announced before the nomination deadline;
- in the case of curtailment announced before a reasonable lead-time defined by the concerned NRAs, taking into the account the liquidity of the relevant markets and the possibility for grid users to adjust their cross-border positions;
- for curtailments of long duration.

The CACM Network Code(s) may also provide that, until the introduction of day-ahead market coupling, alternative compensation arrangements apply as a transitional measure. These transitional arrangements shall be fair, transparent and non-discriminatory.

The CACM Network Code(s) 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 time period shall be subject to approval by the NRAs concerned.

The CACM Network Code(s) 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.

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<sup>9</sup> Please refer to the glossary of the CACM IIA for the definition of the common grid model.

## **6.5 Monitoring**

The CACM Network Code(s) shall ensure that the TSOs and PXs provide all the necessary data to the NRAs and ACER, to enable all necessary monitoring and supervision of the areas covered by these Framework Guidelines.