

ENTSO-E Draft Network Code on Electricity Balancing

Version 1.4

03 December 2012

Notice

This document is an early work-in-progress document reflecting the status of ongoing work by TSO experts as of 3 December 2012, based on the ACER Framework Guidelines on Electricity Balancing published on 18 September 2012, as well as the input received in the frame of an extensive informal dialogue with stakeholders.

This early work-in progress document is subject to amendments and therefore cannot be considered as representing a firm, binding and definitive ENTSO-E position on the contents and structure of the “Network Code on Electricity Balancing”.

[Comments and questions by Eurelectric are preliminary and not necessarily positions, but meant for discussion.](#)

THE EUROPEAN COMMISSION

Having regard to 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,

Having regard to 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 (ACER),

Having regard to Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the network for cross-border exchanges in electricity and repealing Regulation (EC) No 1228/2003 and especially Article 6,

Having regard to the priority list issued by the European Commission on 19 July 2012,

Having regard to the Framework Guideline on Electricity Balancing issued by the Agency for the Coordination of Energy Regulators on 18 September 2012,

Having regard to the draft Regulation on Submission and Publication of Data in Electricity Markets being developed in concurrent timescales to this Network Code,

Whereas:

- (1) 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 and Regulation (EC) No 714/2009 of the European Parliament and of the Council of 13 July 2009 underline the need for an increased cooperation and coordination among transmission system operators within a European Network of Transmission System Operators for Electricity (ENTSO-E) to create Network Codes for providing and managing effective and transparent access to the transmission networks across borders, and to ensure coordinated and sufficiently forward-looking planning and sound technical evolution of the transmission system in the European Union, including the creation of interconnection capacities, with due regard to the environment.
- (2) Transmission System Operators (TSOs) are according to Article 2 and 12 of Directive 2009/72/EC responsible for operating, ensuring the maintenance of and, if necessary, developing the extra high-voltage and high-voltage interconnected system its interconnections with other systems, and for ensuring the long-term ability of the system to meet reasonable demands for the transmission of electricity and with a view to its delivery of electricity to final customers or to distributors.
- (3) As stated in Directive 2009/72/EC a well functioning internal market in electricity should provide producers with the appropriate incentives for investing in new power generation, including in electricity from renewable energy sources, paying special attention to the most isolated countries and regions in the European Union's energy market. A well functioning market should also provide consumers with adequate measures to promote the more efficient use of energy for which a secure supply of energy is a precondition.
- (4) The security of energy supply is an essential element of public security and is therefore inherently connected to the efficient functioning of the internal market in electricity and the integration of the isolated electricity markets of Member States. Electricity can reach the citizens of the Union only through the network. Functioning electricity markets and, in particular, the networks and other assets associated with electricity supply are essential for public security, for the competitiveness of the economy and for the well-being of the citizens of the Union.

- (5) ENTSO-E has drafted this Network Code on Electricity Balancing aiming to set out clear and objective requirements for Transmission System Operators, National Regulatory Authorities and Market Participants in order to contribute to non-discrimination, effective competition and the efficient functioning of the internal electricity market and to ensure system security in particular for the rules for trading related to technical and operational provision of system balancing and the balancing rules including network-related power reserve rules.
- (6) This Network Code has been drafted in accordance with the Article 8(7) of Regulation (EC) N°714/2009 according to which the Network Codes shall be developed for cross-border issues and market integration issues and shall be without prejudice to the right of Member States to establish national network codes which do not affect cross-border trade.
- (7) This Network Code has the objective of contributing to non-discrimination, effective competition, completion and efficient functioning of the internal market in electricity and cross-border trade, security of supply, providing benefits for customers, participation of demand response, supporting the achievement of the EU's targets for penetration of renewable generation, as well as ensuring the optimal management and coordinated operation of the European electricity transmission network.

HAS ADOPTED THIS NETWORK CODE:

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CHAPTER 1

GENERAL PROVISIONS

Article 1

SUBJECT MATTER AND SCOPE

1. This Network Code establishes common rules for Electricity Balancing [and Reserve markets](#). This will involve the establishment of common methodologies for the [efficient market based](#) procurement of Frequency Containment Reserves, Frequency Restoration Reserves and Replacement Reserves, the [efficient market based](#) activation of Balancing Energy from Frequency Restoration Reserves and Replacement Reserves and [efficient market based](#) Settlement.
2. The requirements set forth by this Network Code shall apply to Transmission System Operators, National Regulatory Authorities, the Agency and Market Participants. [Governments?](#)

Article 2

DEFINITIONS

1. For the purpose of this Network Code, the definitions contained in Article 2 of Directive 2009/72/EC and in Article 2 of Regulation (EC) N°714/2009 apply. The definitions contained in the Article 2 of the Network Codes on Requirements for Grid Connection applicable to all Generators, Capacity Allocation and Congestion Management, Demand Connection, Operational Security, Operational Planning and Scheduling, and Load-Frequency Control and Reserves, and Forward Capacity Allocation shall also apply.

2. The following definitions shall apply:

Activation of Balancing Energy

Activation Time

Additional Energy Bids / Energy Only Bids

Adjustment

Allocated Volume

Allocation/Capacity Allocation

Annual Report

Area Process Obligations

Area Monitor of a Type C or Type D Area

Balancing Responsible Party

Balancing Service Provider

Balancing

Balancing Algorithm

Balancing Area

Balancing Energy

Balancing Energy Bids

Balancing Energy Gate Closure Time

Balancing Market

Balancing Reserve Bids

Balancing Reserves

Balancing Reserves Gate Closure Time

Balancing Services

Balancing Timeframe

Basic Volume

Bidding Zone

Central Dispatch Systems

Central Parties

Collateralisation of Reserves

Common Grid Model

Common Merit Order List

Connecting TSOs

Control Area

Control Block

Control Energy

Coordinated Balancing Area

Cost-Benefit Analysis

Counteracting Activation Minimisation Function

Cross-border Balancing

Cross-border (Transmission) Capacity

Cross Border FRR Activation Process

Cross Border RR Activation Process

Cross Zonal Capacity

Cross Zonal Capacity Reservation

Day-Ahead

Deactivation Time

Demand Response

Economic Surplus

Emergency Situation

Exchange of Balancing Energy

Exchange of Balancing Services

Exchange of Balancing Reserves

Exclusive Volumes

Firm/Firmness

Flexible RR

Frequency Containment Reserves

Frequency Restoration Process

Frequency Restoration Reserves

Full Activation Time

Gate Closure Time

Gate Closure Time for BSP Activation

Gate Closure Time for TSO Activation Requests

Gate Closure Time of Cross-Border Transmission Capacity

Gate Closure Time of TSO Bid Submission

Imbalance Direction

Imbalance Netting Function

Imbalance Netting Power

Imbalance Netting Process

Imbalance Price

Imbalance Settlement

Imbalance Settlement Function

Imbalance Settlement Period

Imbalance Volume

Imbalances

Interconnector

Intraday

Intraday Cross Zonal Gate Closure Time

Intraday Cross Zonal Gate Opening Time

Intraday Energy Gate Closure Time

Intraday Energy Gate Opening Time

Local Procurement Platform

Location/Area

Market Time Period

Matching

Matching Function Operator

Matching Time

Merit Order List

Mode of Activation

Monitoring Area

Negative FRR

Netting of Imbalances

Not Shared Bids

Operational Reserves

Period Linked RR

Positive Balancing Bid

Pre-contracted Energy Bids

Pre-qualification (Stage)

Procurement of Balancing Reserves

Program Time Unit

Ramp Rate Process

Ramping Period

Relevant Regulatory Authority

Reliability Margin

Relieve Time of FRR

Replacement Reserves

Requesting TSOs

Reserves Obligations

Reserve Procurement Optimisation Function

Reserve Replacement Process

Set Point Frequency

Settlement

Sharing of Balancing Services

Sharing of Balancing Reserves

Shipping Agent

Social Welfare

Specific Products

Stakeholder Committee

Standard Products

Synchronous Area

Transmission System Operators

Unintentional Deviations

Virtual Tie-Line

Article 3 REGULATORY ASPECTS

1. The requirements established in this Network Code and their applications are based on the principle of non-discrimination and transparency as well as the principle of optimisation between the highest overall efficiency and lowest total cost for all involved parties. [Through the market.](#)
2. Notwithstanding the above, the application of the non-discrimination principle and the principle of optimisation between the highest overall efficiency and lowest total costs for all involved parties shall be balanced with the aim of achieving transparency in issues of interest for the market and the assignment to the real originator of the costs.

Article 4 RECOVERY OF COSTS

1. The costs related to the obligations referred to in this Network Code which have to be borne by regulated Network Operators shall be assessed by National Regulatory Authorities. [Taking into account an integrated approach when relevant markets are integrated.](#)
2. Costs assessed as reasonable and proportionate shall be recovered in a timely manner via network tariffs or appropriate mechanisms as determined by National Regulatory Authorities.

Article 5 CONFIDENTIALITY OBLIGATIONS

1. All entities referred to in Article 1(2) shall preserve due confidentiality of the information and data submitted to them in the fulfilment of the obligations arising from this Network Code.
2. Without prejudice to the obligation to preserve the confidentiality of commercially sensitive information obtained in the course of carrying out its activities, each entity referred to in Article 1(2) shall provide to the operator of any other transmission system with which its system is interconnected, sufficient information to ensure the secure and efficient operation, coordinated development and interoperability of the interconnected system.

Article 6 CONSULTATION

1. The following shall be publically consulted on for a period of at least four weeks by the party responsible for developing the proposal described:
 - (a) the transitory period for the application of the standards and requirements of this Network Code;
 - (b) terms and conditions related to Balancing pursuant to Article 13 [TERMS AND CONDITIONS RELATED TO BALANCING];
 - (c) the list of standard Balancing Energy and Balancing Reserve products pursuant to Article 14 [REQUIREMENTS FOR STANDARD PRODUCTS];
 - (d) the common pricing method for Balancing Energy products pursuant to Article 24 [GENERAL PROVISIONS];
 - (e) Capacity Allocation and reservation methodology pursuant to Article [CAPACITY ALLOCATION AND RESERVATION METHODOLOGY FOR BALANCING SERVICES];
 - (f) a proposal for the Balancing Algorithm as pursuant to Article [BALANCING ALGORITHM DEVELOPMENT];
 - (g) a proposal for the implementation of the transitional arrangements pursuant to Article [IMPLEMENTATION]; and
 - [\(h\) the methodology for the Cost-Benefit Analysis as pursuant to Article \[COST-BENEFIT ANALYSIS\].](#)

~~(h)~~(i) [Use of specific products](#)
2. The views of stakeholders emerging from the consultations undertaken pursuant to paragraph 1 shall be duly considered by the party to whom the obligation is addressed prior to the submission of the document for regulatory approval if required or prior to publication

Comment [OM1]: Consultation period of at least 6 weeks would allow more in-depth analysis

in all other cases. In all cases, a clear and robust justification of the reasons for including or not including the views emerging from the consultation in the submission shall be developed and published in a timely manner.

Article 7 REGULATORY APPROVAL

1. The items specified in paragraphs 2 to 4 shall be treated in a manner consistent with Article 37 of Directive 2009/72/EC.
2. The following shall be subject to approval by all National Regulatory Authorities:
 - a) the proposals for standard Balancing Energy and Balancing Reserve products pursuant to ~~Article 14~~Article 14 [REQUIREMENTS FOR STANDARD PRODUCTS];
 - b) the common pricing method and subsequent revisions for Balancing Energy products pursuant to ~~Article 24~~Article 24 [GENERAL PROVISIONS];
 - c) the methodologies for the creation of a common function for the Activation of Balancing Energy as pursuant to Article 26 [GENERAL PROVISIONS];
 - d) the necessary Common Merit Order Lists as pursuant to Article [OPTIMISATION PRINCIPLES OF ACTIVATION FROM COMMON MERIT ORDER LIST];
 - e) the Balancing Algorithm development process as pursuant to Article [BALANCING ALGORITHM DEVELOPMENT];
 - f) any amendment to the Balancing Algorithm as pursuant to Article [BALANCING ALGORITHM AMENDMENT];
 - g) the criteria and methodology for the Cost-Benefit Analysis as pursuant to Article [COST-BENEFIT ANALYSIS].

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Comment: all items not defined in the NC, but to be developed later (be that a methodology, terms and conditions etc.) should ALL be subject to stakeholder / public consultation and then Regulatory approval. It appears, from this early draft, that this may not be the case.

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3. The following shall be subject to approval by each Relevant National Regulatory Authority of the concerned Coordinated Balancing Area:
 - a) all methodologies relevant to the declaration of Balancing Cooperation pursuant to ~~Article 10~~Article 10 [COORDINATED BALANCING AREA];
 - b) the methodologies used to calculate or establish the terms and conditions for the provision of Balancing Services as pursuant to ~~Article 13~~Article 13(1) [TERMS AND CONDITIONS RELATED TO BALANCING];
 - c) conditions for aggregation of, at least, small demand and/or generation units within a Control Area or Monitoring Area to offer Balancing Services;
 - d) the existence and use of Specific Products pursuant to ~~Article 15~~Article 15 [THE USE OF STANDARD PRODUCTS];
 - e) the selection and conversion of offers for Specific Products pursuant to Article 16 [SELECTION AND CONVERSION OF SPECIFIC PRODUCTS];
 - f) terms and conditions on procurement of Balancing Services pursuant to ~~Article 19~~Article 19(1)[GENERAL PROVISIONS];
 - g) the common pricing method and subsequent revisions for Balancing reserve products pursuant to ~~Article 19~~Article 19 [GENERAL PROVISIONS];
 - h) the linking of upward and downward Balancing Reserves procurement pursuant to Article 20[GENERAL PROVISIONS];
 - i) amendments to the reservation methodology;
 - j) Imbalance Settlement mechanisms, in particular:

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Comment [OM2]: How small is defined?

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- the procedure to define Imbalance Volumes as pursuant to Article [IMBALANCE VOLUME CALCULATION];
 - the procedure to define Imbalance Prices as pursuant to Article [IMBALANCE PRICE CALCULATION];
 - the Imbalance Settlement Period as pursuant to Article [IMBALANCE SETTLEMENT PERIOD].
- k) the procedures for Settlement amendment as pursuant to Article [GENERAL PROVISIONS];
4. The following shall be subject to approval by each National Regulatory Authority of the Member States concerned, as determined on a case-by-case basis:
- a) the terms and conditions related to Balancing pursuant to ~~Article 13~~Article 13(2) [TERMS AND CONDITIONS RELATED TO BALANCING];
 - b) the application by a Transmission System Operator to offer the Balancing Services if system security is threatened due to insufficient bids from Balancing Service Providers as pursuant to Article 11 [ROLE OF THE TSOS];
 - c) the application by a Transmission System Operator for a combined procurement and to accept additional bids linking upward and downward bids as pursuant to Article 19;
 - d) the application by a Transmission System Operator for a contract on Balancing Reserves longer than twelve consecutive months as pursuant to Article 19;
 - e) the application by a Transmission System Operator to require a Balancing Service Provider to offer unused generation capacity in the Balancing Markets as pursuant to Article 25 [STANDARD BALANCING ENERGY PRODUCTS];
 - f) methodologies to develop common Capacity Allocation and reservation pursuant to Article [CAPACITY ALLOCATION AND RESERVATION METHODOLOGY FOR BALANCING SERVICES]; the application by a Transmission System Operator for a Settlement Period longer than 30 minutes as pursuant to Article [IMBALANCE SETTLEMENT PERIOD]; Comment: how would this work in terms of cross-border trade and market harmonization, if neighboring TSOs (in the same market) had different settlement period durations?
 - g) the application for derogation in respect of one or more provisions of this Network Code as pursuant to Article [DEROGATIONS].
5. For each of the approvals specified in paragraphs 2 to 4, Transmission System Operators shall, prior to the expiry of the deadline for developing procedures for the provision of Balancing Services specified in this Network Code, submit those procedures, to its National Regulatory Authority for approval. All submissions shall include a proposed timescale for implementation and a description of the expected impact of the procedure. Coordination!
6. National Regulatory Authorities shall, after having received the proposals pursuant to paragraphs 1 to 5, provide Transmission System Operators with an approval or request to amend the proposals within:
- a) three months after having received a proposal if the approval process concerns only one National Regulatory Authority;
 - b) six months after having received a proposal if the approval process concerns more than one National Regulatory Authority.
7. In the event that the concerned National Regulatory Authorities request an amendment to the proposals pursuant to paragraphs 1 to 5, Transmission System Operators shall resubmit an amended procedure for approval within three months.

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8. Where the concerned National Regulatory Authorities have not been able to reach a decision within the period time pursuant to paragraph 6 of this article, each relevant National Regulatory Authorities shall inform the Agency. The Agency shall decide upon those regulatory issues that fall within the competence of National Regulatory Authorities as specified under Article 8 of Regulation (EC) No 713/2009.
9. Transmission System Operators shall implement the decision of National Regulatory Authorities by a date no later than the date specified in the decision.

Article 8 PUBLICATION OF INFORMATION

1. The items consulted upon according to ~~Article 6~~Article 6(1) shall be made publically available after their approval, if regulatory approval is required, or after finalisation in all other cases by the party to whom the obligation is addressed.
2. All entities referred to in ~~Article 1~~Article 1(2) shall ensure that information is published at a time and in a format which does not create an actual or potential competitive advantage or disadvantage to any individual party or category of party.
3. Transmission System Operators shall publish, at a minimum, the following information:
 - a) terms and conditions related to Balancing pursuant to Article 13 [TERMS AND CONDITIONS RELATED TO BALANCING];
 - b) information related to the requirement for becoming a Balancing Service Provider as pursuant to Article [TERMS AND CONDITIONS FOR BSPs];
 - c) information related to the requirement for becoming a Balancing Responsible Party as pursuant to Article [TERMS AND CONDITIONS FOR BRPs]; and
 - d) information related to volumes and prices of all Balancing Energy Bids, possibly in an aggregated and anonymous format.
4. Each Transmission System Operator shall publish, at a minimum, the following information on Specific Products:
 - a) the volumes of Specific Products available in their Control Area;
 - b) the volumes of Specific Products activated in their Control Area;
 - c) a description of the functional requirements of any algorithm developed pursuant to Article [BALANCING ALGORITHM DEVELOPMENT];
 - d) information related to Cross Zonal Capacity Reservation as pursuant to Article [CAPACITY ALLOCATION AND RESERVATION METHODOLOGY FOR BALANCING SERVICES];
 - e) information where the Activation of Balancing Energy deviates from the merit order activation principals as pursuant to Article [GENERAL PROVISIONS]; and
 - f) all information contained in the common Annual Report as pursuant to Article [ANNUAL REPORT].

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CHAPTER 2 THE ELECTRICITY BALANCING SYSTEM

SECTION 1 PRINCIPLES OF THE BALANCING MARKET

Article 9 GENERAL OBJECTIVES OF THE BALANCING MARKET

1. All entities referred to in Article 1(2) shall cooperate in fulfilling the obligations specified within this Network Code, in order to promote the completion and efficient functioning of the internal market in electricity and to ensure the optimal management, coordinated operation and sound technical evolution of the European electricity transmission system.
[What does this exactly mean? Seems logical.](#)
2. This Network Code shall facilitate the achievement of the following objectives:
 - (a) safeguarding operational security;
 - (b) fostering effective competition, non-discrimination and transparency in Balancing [and reserves](#) Markets;
 - (c) ensuring that the procurement of Balancing [and reserve](#) Services is fair, objective, transparent and market-based, fosters the liquidity of Balancing Markets, avoids undue entry barriers for new entrants and prevents undue distortions from within the internal market in electricity and especially between adjacent Coordinated Balancing Areas;
 - (d) safeguarding the efficient functioning of other electricity markets, in time frames different from the Balancing Markets;
 - (e) facilitating wider participation of Demand Response and supporting the achievement of the EUs targets for penetration of renewable generation; [is doubling 3](#)
 - (f) increasing efficiency of the operation and functioning of Balancing Markets; and especially avoiding undue market fragmentation [by setting the framework for balancing and reserve market integration; promoting the Exchange of Balancing Services and Sharing of Balancing Services;](#)
 - (g) providing benefits for consumers; and [what extra does this provision mean?](#)
 - (h) contributing to the efficient long-term operation and development of the European electricity Transmission System and electricity sector

in order to enhance pan-European Social Welfare.

In fulfilling the requirements of this Network Code, Transmission System Operators and National Regulatory Authorities shall [integrate balancing and reserve markets in order to create a true IEM, use reasonable endeavours to exploit synergies, draw on experience gained, respect decisions made as part of, and to use solutions developed as part of, Balancing cooperation projects contributing to the development of the internal market in electricity at regional level commenced, concluded or on-going at the date at which this Network Code enters into force.](#)

Article 10 COORDINATED BALANCING AREA

1. Each Transmission System Operator shall cooperate with at least one neighbouring Transmission System Operator in a Coordinated Balancing Area. [strange: i would say all. Off course interim steps should be taken. Why this clause?](#)

2. All Transmission System Operators intending to cooperate in a Coordinated Balancing Area shall submit a common proposal detailing the products of said cooperation to the Relevant Regulatory Authorities six months before the intended implementation date. Coordinated Balancing Areas declared for the Exchange of Balancing Reserves shall be consistent with Coordinated Balancing Areas for the Exchange of Balancing Energy for the same Balancing Service. Coordinated Balancing Areas for the Exchange of Balancing Reserves shall be constituted of at least two Control Areas or Monitoring Areas of the corresponding Coordinated Balancing Area for the Exchange of Balancing Energy of the same Balancing Service, and not exceed the latter. [Why this clause. What does it exactly say???? \(many bilateral agreements?\)](#)
3. Each Transmission System Operator shall be entitled to submit the common proposal for a Coordinated Balancing Area to all National Regulatory Authorities regarded as relevant for the Coordinated Balancing Area in coordination with all other participating Transmission System Operators.
4. All Transmission System Operators of two or more interconnected Coordinated Balancing Areas shall be entitled to exchange all Balancing Services between these Coordinated Balancing Areas, which are already exchanged within these Coordinated Balancing Areas. Coordinated Balancing Areas shall not cease to exist in case Balancing Services are exchanged between them. [I don't get the point of this clause.](#)
5. Transmission System Operators shall with respect to different Balancing Services be entitled to cooperate in more than one Coordinated Balancing Areas. [Is this possible?](#)
6. Each Transmission System Operator cooperating in a Coordinated Balancing Area shall ensure that all Area Process Obligations, as set forth in the Network Code on Load Frequency Control and Reserves, are respected therein. [Seems logical. Why include it?](#)
7. In case where the Exchange of Balancing Energy between two or more Transmission System Operators is expected to affect physical flow conditions in any third country, each National Regulatory Authority of such country, not addressed in the proposal in accordance with paragraph 2 of this article, is entitled to declare its status as Relevant Regulatory Authority for the respective Coordinated Balancing Area to the Agency for acknowledgement.

[This paragraph is strange. Is a cooperation of two TSOs enough to comply?](#)

SECTION 2 FUNCTIONS AND RESPONSIBILITIES

Article 11 ROLE OF THE TRANSMISSION SYSTEM OPERATORS

1. Transmission System Operators are responsible for organising European Balancing Markets and shall strive for their integration, keeping the system in balance in the most efficient manner and following the general objectives defined in Article 9 of this Network Code. To do so, they shall work with each other in close cooperation and coordinate their activities as much as [necessary](#). [What is necessary? What should be reached.](#)
2. Each Transmission System Operator is responsible for procuring the [Reserves?](#) Balancing Services [I one could argue that a TSO doesn't buy the energy, but only activates based on a](#)

bid which is financially settled with the BRPs] from Balancing Service Providers to safeguard the operational security.

3. Transmission System Operators are not allowed to offer the Balancing Services themselves except, subject to the approval of the National Regulatory Authorities, if system security is threatened due to insufficient bids from Balancing Service Providers. This is strange. What can the TSO offer to himself? If, it would be under the same conditions on the market. However, this may lead to an unbundling problem. In any case, it could be allowed only where this is the ONLY way of recovering from emergency system security situation.
4. Transmission System Operators ~~is obliged~~shall use best endeavours to facilitate the Exchange of Balancing Energy within a Coordinated Balancing Area and ensure its applicability.
5. All Transmission System Operators within a Coordinated Balancing Area, or any other cooperation between two or more Transmission System Operators dealing with the Sharing of Balancing Services or Netting of Imbalances as stipulated in this Network Code, shall have equal decision making rights. To what extent? What are these exactly?

Article 12 ROLES IN COORDINATED BALANCING AREAS

1. The cooperation processes in all Coordinated Balancing Areas shall involve the following roles, which are:
 - (a) Matching Function Operator;
 - (b) Counteracting Activation Minimisation Function;
 - (c) Imbalance Settlement Function;
 - (d) Reserve Procurement Optimisation Function; and
 - ~~(e)~~ (f) Does this include coordinated network security assessment (from ex ante to real time), to be able to estimate and monitor available XB capacity like each individual TSO does in its own network?
2. Each Transmission System Operator shall be responsible to exercise these roles in the Control Area or Monitoring Area for which it is solely responsible in accordance with the Network Code on Load Frequency Control and Reserves. Transmission System Operators shall be entitled to delegate the tasks pertaining to the roles listed in paragraph 1 of this article to a competent third party. The delegating Transmission System Operator shall remain responsible for ensuring compliance with delegated tasks. I don't fully understand this, but it sounds sensible.
3. Each Transmission System Operator of a Coordinated Balancing Area shall delegate each role specified in paragraph 1 of this article to the same party. All Transmission System Operators shall be entitled to delegate more than one role to the same party.
4. Prior to the delegation of tasks pertaining to the roles listed in paragraph 1 of this article the party to which the task is to be delegated shall have clearly demonstrated its ability to perform the delegated tasks to the satisfaction of the delegating party. (to whom?) (Where a third party (or parties) is appointed, to perform the tasks listed in Art 12 (1), they should also demonstrate / have in place fallback arrangements in case they (the third party) fails.)

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5.6. In the event that all or part of any role specified in this Network Code is delegated to a third party, the delegating Transmission System Operator shall ensure that suitable confidentiality arrangements have been put in place prior to delegation.

Article 13

TERMS AND CONDITIONS RELATED TO Reserves and BALANCING

1. No later than x months after the entry into force of this Network Code all Transmission System Operators of a Coordinated Balancing Area shall develop a methodology for the establishment of the terms and conditions related to Balancing. This methodology shall ensure a sufficient level (what is sufficient?) of coordination between all Transmission System Operators of the Coordinated Balancing Area in order to realise a competitive integrated balancing and reserve market ~~foster effective competition~~.
2. The terms and conditions related to Balancing shall facilitate the achievement of the objectives (what is this?) of the Balancing Market as defined in Article 9 of this Network Code.
3. Each Transmission System Operator shall ensure that all parties subject to the terms and conditions related to Balancing located in its Control Area or Monitoring Area meet the requirements set in those terms and conditions.
4. The terms and conditions shall specify all preconditions for the participation in the procurement of Balancing Services.
5. No later than twelve months after the approval of the methodology for the establishment of the terms and conditions related to Balancing in a Coordinated Balancing Area, each Transmission System Operator shall define the terms and conditions related to Balancing based on this methodology. These terms and conditions related to Balancing shall consist of ~~reasonable and justified~~ requirements that lead to an integrated balancing and reserve market and at least contain:
 - (a) technical and contractual requirements for Balancing Service Providers in accordance with [TO BE COMPLETED];
 - (b) technical and contractual requirements for Balancing Responsible Parties in accordance with [TO BE COMPLETED];
 - (c) terms and conditions for procurement of Balancing Services in accordance with [CHAPTER 3 OR TO BE DEFINED];
 - (d) rules for the Settlement as a consequence of the processes referred to in this Network Code in accordance with [TO BE COMPLETED]; and
 - (e) the modalities in case of non-compliance with technical and contractual requirements.
6. Each Transmission System Operator shall make the terms and conditions on procurement of Balancing Services publicly available on its website in accordance with the approval of Relevant Regulatory Authorities. The terms and conditions shall be made available in English, at least, and sufficiently in advance before the procurement starts.

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CHAPTER 3 PROCUREMENT OF BALANCING SERVICES

SECTION 1 GENERAL PROVISIONS FOR PROCUREMENT

Article 14 REQUIREMENTS FOR STANDARD PRODUCTS

1. All Transmission System Operators of a Coordinated Balancing Area shall define standard Balancing Reserve and Energy products. [These products should fulfil the technical requirements and lead to maximum market depth.](#)
2. Each Transmission System Operator shall use these standard Balancing Reserve and Energy products for procurement and activation of Frequency Containment, Frequency Restoration and Replacement Reserve products to safeguard operational security and to balance the system.
3. All Transmission System Operators shall prepare a common proposal for standard Balancing Reserve and Energy products no later than twelve months after entry into force of this Network Code and submit it to the Agency and all National Regulatory Authorities. [Why is this time needed?](#)
4. The standard Balancing Reserve and Energy products shall consist of at least the following standard characteristics:
 - (a) Full Activation Time;
 - (b) minimum and maximum quantity;
 - (c) Deactivation Time;
 - (d) price;
 - (e) divisibility;
 - (f) delivery period; and
 - (g) Mode of Activation.

~~(g)~~ [What are all these exactly? What if products exist that don't need one or more of these characteristics?](#)

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5. Standard Balancing Reserve and Energy products shall:
 - (a) satisfy the needs of all Transmission System Operators of a Coordinated Balancing Area in order to safeguard operational security;
 - (b) allow participation of the load, energy storage facility and generation including renewables entities to become a Balancing Service Provider, aggregated or not; and follow the rules defined in the Network Code for Load Frequency Control and Reserves; and [Seems logical.](#)
 - (c) include the obligation that Balancing Service Providers with a contract for standard Frequency Restoration Reserve products and Replacement Reserve products bid on the Balancing Energy market at least the contracted volumes.

Comment [OM3]: No preferential treatment should be given. Rules should not be technology specific to avoid distortions in the market

6. All Transmission System Operators shall review the characteristics of standard Balancing Reserve and Energy products [sufficiently often](#). In case all Transmission System Operators update these characteristics, they shall submit an update proposal for standard Balancing Service products to the Agency and all National Regulatory Authorities.

Comment [OM4]: What does it mean?

Article 15 THE USE OF STANDARD PRODUCTS

1. Each Transmission System Operator of a Coordinated Balancing Area shall use Standard Products for Frequency Containment, Frequency Restoration and Reserve Replacement processes to safeguard operational security. [Should be defined on European level?](#)
2. A Transmission System Operator is not obliged to use all Standard Products, if there is no need for a certain Standard Product in a Transmission System Operator's Control Area. [How is this possible. That TSO doesn't contribute the same as the others.](#)
3. Each Transmission System Operator may use Specific Products to safeguard operational security when:
 - (a) Standard Products as defined in Article 14 respectively are not sufficient to safeguard operational security; and
 - (b) the use of Specific Products shall not create significant inefficiencies and distortions in national and/or adjacent markets.
4. The relevant National Regulatory Authorities shall approve or fix the existence and use of Specific Products once duly justified by the Transmission System Operator.
5. Each Transmission System Operator using Specific Products shall make these visible for other Transmission System Operators of the Coordinated Balancing Area.

Article 16 SELECTION AND CONVERSION OF PRODUCTS

1. Where Transmission System Operators use Specific Products for the Balancing of the system, they have the right to submit these Specific Products into the common procurement of Balancing Services, provided [these are convert](#) to the format used in the common procurement of Balancing Services.
2. Transmission System Operators operating in Central Dispatch Systems are responsible for selecting the offers which are technically available for the Exchange of Balancing Services and then converting them into offers for Standard Products used in the common procurement of Balancing Services.
3. The process of selecting and converting offers as defined in this article shall be fair, transparent and non-discriminating.

Comment [OM5]: Offers should be done in a correct format by the BSP in the first place

3- [How does this article comply with a non-discriminatory integrated market?](#)

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Article 17 FIRMNESS OF PRODUCTS

1. Volumes of Balancing product bids given by Balancing Service Provider shall be firm after the Gate Closure Time defined for the relevant Balancing product. Unexpected unavailable volumes (due to failure) of a Balancing Service Provider unit after the Gate Closure Time should be reported to the delivering Transmission System Operator without delay.

2. Gate Closure Time for Balancing products shall take into account operational security, the Gate Closure Times of the other cross-border energy markets and it shall promote the market liquidity. [\(is this related to firmness\)](#)
3. In case of activation by the Transmission System Operator of Balancing products, even prior or after Gate Closure Time for Balancing products, the activated Balancing products are firm. [This is strange. When does this occur? An offer of the balancing market is a contract for a certain period.](#)

Article 18 FALLBACK PROCEDURES

1. Transmission System Operators shall ensure that robust and timely fallback solutions are in place to ensure efficient, transparent and non-discriminatory functioning of the procurement and activation of Balancing Services in the event that normal procedures fail.
2. In the event that the procurement of Balancing Services fails prior to the activation period, all Transmission System Operators of a Coordinated Balancing Area shall foresee a repetition procedure in order to enable a market-based contracting to the greatest possible extent. Transmission System Operators shall use best endeavours to inform market participants that fallback procedures are used as soon as reasonably practicable. In the event the coordinated activation of Balancing Energy fails due to technical reasons, Transmission System Operators may bypass the Common Merit Order List activation. [When is this applicable? Are there examples of such occurrences?](#)
3. The use fallback procedures shall not affect the Transmission System Operator's right to perform any necessary actions to ensure system security according to the [national legislation or](#) Networks Code for Operational Security.

SECTION 2 PROCUREMENT OF BALANCING RESERVES

Article 19 GENERAL PROVISIONS

1. The Balancing Reserve procurement shall start no earlier than twelve months before the first Program Time Unit of the contracted period. Contracted period shall not exceed twelve consecutive months. [Should be as close as possible before day ahead.](#)
2. Procurement of Balancing Reserves shall be made for upward and downward Balancing Reserves separately except for the procurement of Frequency Containment Reserves. If it can be demonstrated that Social Welfare is improved, the respective Transmission System Operator is entitled to combine procurement and to accept additional bids linking upward and downward Balancing Reserves Bids subject to approval of Relevant Regulatory Authorities. [When is this applicable?](#)
3. A Balancing Service Provider may transfer its obligations to deliver a Balancing Reserve to another Balancing Service Provider in the same Coordinated Balancing Area in order to keep its commitment. In such case:
 - (a) the Balancing Service Provider is allowed to transfer its obligations to deliver a Balancing Reserve from registered Balancing Service Provider in shorter timeframes;

- (b) the Balancing Service Provider has to announce to its Connecting Transmission System Operator the collateralisation respecting the terms and conditions related to Balancing;
 - (c) Settlement of the collateralised Balancing Reserves will be done towards collateralising Balancing Service Provider; and
 - (d) the collateralising Balancing Service Provider is liable to comply with rights and duties to which it has committed to.
4. Detailed modalities of collateralisation shall be included in the terms and conditions related to Balancing.
5. All Transmission System Operators of a Coordinated Balancing Area shall propose to the relevant National Regulatory Authorities, after prior consultation to relevant stakeholders, a common pricing method for each Balancing Reserve product exchanged in the Coordinated Balancing Area, which shall:
- (a) ensure an economically efficient use of all Balancing resources, including Demand Response, renewable and intermittent energy sources subject to operational security limits;
 - (b) give correct price signals and right incentives to market participants;
 - (c) ensure that there are no significant distortions between adjacent Coordinated Balancing Areas; and
 - (d) enable Balancing Service Providers to participate in the Procurement of Balancing Reserves based on market based bid pricing.
6. Transmission System Operators of a Coordinated Balancing Area shall be entitled to propose to the relevant National Regulatory Authorities amendments to the common pricing method of each Balancing Reserve product in the Coordinated Balancing Area, after prior consultation with relevant stakeholders.

Comment [OM6]: No preferential treatment should be given. Rules should not be technology specific to avoid distortions in the market

Comment [OM7]: What does it mean?

SECTION 3 CROSS-BORDER EXCHANGES AND SHARING OF BALANCING RESERVES

Article 20 GENERAL PROVISIONS

Article 20 Starting point of the code should be cooperation of TSOs.

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1. In accordance with the general objectives of this Network Code set forth in Article 9, each Transmission System Operator should bring forward argumentation not to apply for has the right to decide for the application of Exchange of Balancing Services or Sharing of Balancing Reserves, or both, respecting the Network Code on Load Frequency Control and Reserves and respecting Chapter 4 of this Network Code.
2. All Balancing Service Provider shall be allowed to submit and update their Balancing Reserve Bids until the Balancing Reserves Gate Closure Time. This is general and not related to XB balancing alone.

Article 21
MODELS FOR CROSS BORDER EXCHANGE AND SHARING OF RESERVES

1. With the Exchange of Balancing Reserves a Transmission System Operator is able to procure part of its Reserves Obligations given by the Network Code on Load Frequency Control and Reserves from adjacent Transmission System Operators or within (limited to?) a Coordinated Balancing Area. Any market party should be entitled to offer reserve products to any TSO subject to approval of involved TSOs.

Article 22
LOCAL COLLECTION OF BALANCING RESERVE BIDS

1. All Balancing Service Providers shall submit their Balancing Reserve Bids to the Connecting Transmission System Operator in which the Balancing Service Provider is associated with a Balancing Responsible Party. (excludes TSO-BSP in an interim phase)
2. Each Balancing Service Provider shall be associated to at least one Balancing Responsible Party and declare this association to the Connecting Transmission System Operator.
3. All Transmission System Operators shall verify the compliance of offers submitted by Balancing Service Providers with the terms and conditions related to Balancing. What does this mean in this article?

Article 23
PROCUREMENT OF BALANCING RESERVE BIDS

1. Each Transmission System Operator of a Coordinated Balancing Area for the Exchange of Balancing Reserves shall submit all Balancing Reserve Bids qualified for the participation in the coordinated Procurement of Balancing Reserves in the Coordinated Balancing Area to the Reserve Procurement Optimisation Function (= CMO?).
2. The Reserve Procurement Optimisation Function shall select the combination of bids giving the lowest possible procurement cost respecting the operational security constraints of other Network Codes, by at least taking into account (is this mixing of balancing and congestion management?):
 - (a) obligations for Exclusive Volumes [what are these? Can it exist in a market?] within the Transmission System Operator's Control Area or Monitoring Area;
 - (b) costs of ensuring sufficient availability of transmission capacity [redispatch??]; and
 - (c) other elements limiting the exchangeable volumes of Balancing Reserves, where justified. What are these?

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SECTION 4
PROCUREMENT OF THE BALANCING ENERGY

Article 24
GENERAL PROVISIONS

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Article 24 Here again: Does the TSO really procure energy? He should not be exposed to the financial risk.

1. All Transmission System Operators shall harmonise the pricing method for Balancing Energy products, which shall:
 - (a) ensure an economically efficient use of Demand Response and other Balancing resources subject to operational security limits;
 - (b) give correct price signals and incentives to market participants (BRPs?); and
 - (c) enable Balancing Service Providers to establish a market based bid pricing.
 - (d)

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The NC should develop a proposal to make it marginal, as stated in the FG

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(e)

2. If significant elements justify it, the common pricing method shall be changed via a process including public consultation and all National Regulatory Authority's approval.

Changing the pricing methodology should need a revised NC. It is not clear whether the proposal is to allow individual NRAs or even TSOs to change it. Besides,

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3. No later than one year after the entry into force of this Network Code, all Transmission System Operators shall develop an initial proposal for the pricing method and submit it to the Agency and all National Regulatory Authorities. The initial pricing method shall be based on marginal pricing (pay-as-cleared), unless Transmission System Operators provide all National Regulatory Authorities with a detailed analysis demonstrating that a different pricing method is more efficient for EU-wide implementation in pursuing the general objectives defined in Article 9 of this Network Code.
4. Subject to its National Regulatory Authorities approval, each Transmission System Operator shall be authorised to require information on unused generation capacity and other Balancing resources from Balancing Service Providers after Day-Ahead and Intraday Gate Closure Time.
5. Subject to its National Regulatory Authorities approval, each Transmission System Operator shall be authorised to require Balancing Service Providers to offer their unused generation capacity or other balancing resources through bids in the Balancing Markets after day-ahead and Intraday Gate Closure Time. Do we need this obligation? A competitive market should be incentive enough.

Article 25

STANDARD BALANCING ENERGY PRODUCTS

1. Balancing Service Providers with a contract for Reserves shall bid on the Balancing energy market.
2. All Balancing Service Provider shall be allowed to submit and update their Balancing Energy Bids until the Balancing Energy Gate Closure Time.