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Agency for the Cooperation of Energy Regulators

OPINION OF THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS No 07/2014

of 21 March 2014

ON ENTSO-E NETWORK CODE ON ELECTRICITY BALANCING

THE AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

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[1], and, in particular, Articles 6(4) and 17(3) thereof,

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[2], and, in particular, Article 6(7) thereof,

HAVING REGARD to the favourable opinion of the Board of Regulators of 18 March 2014, issued pursuant to Article 15(1) of Regulation (EC) No 713/2009,

WHEREAS:

(1) The Framework Guidelines on Electricity Balancing, FG-2012-E-009 (the "Framework Guidelines")[3], were adopted by the Agency on 18 September 2012, pursuant to Article 17(3) of Regulation (EC) No 713/2009.

(2) Following the adoption of these Framework Guidelines, the Commission invited ENTSO-E, by letter of 21 December 2012, to start the drafting of a network code and to submit it to the Agency, pursuant to Article 6(6) of Regulation (EC) No 714/2009, by 1 January 2014.

(3) On 23 December 2013, ENTSO-E submitted to the Agency, pursuant to Article 6(6) of Regulation (EC) No 714/2009, the Network Code on Electricity Balancing (the "Network Code"), accompanied by a "Supporting Document for the Network Code on Electricity Balancing" (the "supporting document")[4].

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[1] OJ L 211, 14.8.2009, p. 1.
[2] OJ L 211, 14.8.2009, p. 15.
[3] http://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Framework_Guidelines/Framework%20Guidelines/Framework%20Guidelines%20on%20Electricity%20Balancing.pdf
[4] https://www.entsoe.eu/major-projects/network-code-development/electricity-balancing/

(4) This supporting document has been taken into account when assessing the Network Code's content in this opinion.

(5) The Agency acknowledges the importance of the Network Code for the completion and well-functioning of the internal market in electricity and cross-border trade, including the delivery of benefits to customers and the facilitation of the European Union's targets for the penetration of renewable energy sources.

(6) In drafting the Network Code, ENTSO-E involved stakeholders with a direct interest in this Network Code. ENTSO-E established a stakeholder advisory group for this Network Code, consisting of representatives of major European-wide stakeholder associations. The stakeholder group met on four occasions where stakeholders were able to present their views and voice their concerns. In addition, ENTSO-E organised three public workshops open to all interested stakeholders. The presentations and other working material from these events are well documented on ENTSO-E's website.

(7) The Agency drafted this reasoned opinion in a transparent manner and by involving stakeholders. First, stakeholders were invited to provide written comments on the Network Code. Second, a dedicated workshop was organised to allow stakeholders to express their views. All comments received from stakeholders were carefully assessed and duly taken into account, when relevant, in preparing this opinion.

(8) The Network Code is interrelated with network codes that are being developed in other areas pursuant to Article 6 of Regulation (EC) No 714/2009. It is essential that those network codes are consistent and coherent with the Network Code,

HAS ADOPTED THIS OPINION:

The integration of balancing markets into one single European balancing market is a very challenging goal that can only be achieved through a stepwise process comprising concrete implementation projects. The process must be accompanied by correct incentives for transmission system operators ("TSOs") and more importantly supported by a robust legal framework to avoid inefficiencies, delays or market distortions arising from existing varying balancing market arrangements. The complexity of integrating balancing markets is due to the relatively limited experience with early implementation projects (compared to other timeframes) and therefore the lack of useful information on best practices. Given this starting point, it is inevitable that the Network Code needs to define a new standard that will significantly deviate from existing practices in most Member States. However, due to the limited clarity on the final target model, it is also inevitable that many important elements needed for the creation of a European balancing market will have to be developed subsequently, after some more experience is gained with implementation.

From this perspective the Agency recognises ENTSO-E's effort to align the Network Code to the Framework Guidelines and Regulation (EC) No 714/2009 and acknowledges that the Network Code will help facilitate market integration, as well as non-discrimination, effective competition and the efficient functioning of the market. The Agency also acknowledges the significant efforts of ENTSO-E to define a framework for TSOs cooperation to pave the way towards the integration of national balancing markets into regional and European balancing markets, and to establish market-based, objective, fair, transparent and non-discriminatory rules for balancing. Despite its significant added value in supporting the creation of a European balancing market, the Network Code is, in some specific areas, not in line with the Framework Guidelines and the objectives stated therein.

The Framework Guidelines have assigned TSOs a central role in integrating the balancing markets within clearly defined implementation timelines which define an ambitious but balanced compromise between market players' and TSOs' positions. The Agency notes that the Network Code does not respect these timelines and, to some degree, introduces a legally unenforceable framework based on a voluntary approach that is not always conducive to the integration of the Internal Electricity Market. The Agency reaffirms that only clear and legally binding requirements on TSOs and other relevant parties can provide added value to the integration process.

Moreover, the Framework Guidelines have defined the principles for the design of balancing markets, which were considered as essential to satisfy the key objectives of integrating balancing markets. The Agency is of the opinion that the Network Code is not ambitious enough in harmonising and standardising the core elements needed to achieve a well-functioning, competitive and integrated balancing market, while taking operational security constraints into consideration. These elements are (i) adequate incentives on balance responsible parties ("BRPs") to balance themselves or to help balance the power system, (ii) a consistent framework to foster competition between balance service providers ("BSPs"), and (iii) efficiency of balancing actions performed by TSOs.

Firstly, the Agency is convinced that only the imbalances after the closure of the intraday market should be balanced by TSOs within the balancing market timeframe. The Agency believes that the Network Code should put higher focus on decreasing the needs for TSOs to balance the system by imposing correct incentives and providing adequate and timely information to BRPs to balance themselves during the intraday timeframe and as close as possible to real time. The balancing needs could also be significantly reduced if all TSOs implement and use an imbalance netting process and establish a harmonised imbalance settlement framework.

Secondly, the Network Code misses several opportunities to greatly enhance competition in balancing markets compared to the existing situation. This in particular relates to the framework for the definition of products and related common merit order lists ("CMOL"), which do not promise sufficient standardisation, and a lack of efficient arrangements that would facilitate the participation of flexible balancing resources, including renewables and demand response. The Agency also expects that the implementation of the pay-as-cleared method to price balancing energy, in parallel with gradual market integration, will greatly enhance competition in balancing markets. To guarantee a level playing field for all market participants, ENTSO-E should put its best effort to include in the Network Code transparent and well-detailed common principles for the establishment of the methodologies or the terms and conditions related to balancing.

Thirdly, the Agency calls for the elaboration of equivalent levels of requirements and provisions to apply to central-dispatch and self-dispatch systems. In fact the Agency is concerned that the Network Code does not provide sufficient confidence in the future establishment of efficient cross-border competition between market participants in central-dispatch systems and self-dispatch systems, and the creation of a single European balancing market based on the parallel existence of both types of systems. While it is understandable that some differences between these two systems will remain, the Agency expects that the Network Code should minimise, wherever possible, the side effects on efficiency and cross-border competition that could arise from the coexistence of these two types of systems.

The Agency further details, in the enclosed annex, the specific divergences of the Network Code from the Framework Guidelines and suggests the improvements required before the Agency can recommend the Network Code for adoption. The Agency believes that these improvements can be addressed by ENTSO-E within a period of a few months and should not significantly delay the adoption of the Network Code, which represents a key instrument for the completion of a well-functioning Internal Electricity Market that delivers tangible benefits to European energy consumers.

Done at Ljubljana on 21 March 2014.

For the Agency:

Alberto Pototschnig
Director

ANNEX: specific concerns

1. The roles and responsibilities of involved parties in creating pan European integrated balancing markets

1.1. The role of Transmission System Operators

The TSO, as the only party that has a real-time overview of the system in its responsibility area, has the exclusive responsibility for operational security. The Framework Guidelines are clear in requesting the TSOs to be responsible for balancing and to "*strive for the integration*" of their national systems. The Network Code should therefore explicitly include the integration of balancing markets among the duties of the TSOs.

Moreover, the Network Code allows TSOs to offer balancing services themselves, subject to regulatory approval. The Agency believes that the procedure by which a TSO may be allowed to provide balancing services should be better clarified. Since the provision of balancing services by a TSO may heavily affect and distort competition and balancing market efficiency, such possibility should be thoroughly justified based on objective criteria and be considered only where every market-based alternatives have been explored and exhausted.

1.1.1. An efficient framework for TSOs' cooperation

According to the Framework Guidelines, TSOs shall work with each other in close cooperation and coordinate their activities as much as necessary. From this perspective, the Agency believes that the concept of coordinated balancing area ("CoBA") has the potential to streamline the integration process provided it can guarantee that the requirements of the Network Code on implementation of regional and European integration models are satisfied. In particular, the Agency is of the opinion that the possibility for a CoBA to involve only 2 TSOs may not be sufficient to support an efficient integration process[5]: the Network Code should therefore require that at least 3 TSOs cooperate in any CoBA, except where TSOs operating island systems are involved. The Agency finds the decision process envisaged by TSOs in the CoBAs inadequately addressed in the Network Code as the unanimous decision making process does not enable an efficient governance of the integration process. Therefore the Agency suggests that, in this respect, the Network Code should be aligned with the

[5] While the definition and implementation of balancing pilot projects could be more flexible, the cooperation between 3 TSOs would help in the merging process and guarantee the development of multilateral solutions.

Network Code on Capacity Allocation and Congestion Management ("NC CACM") as per its working draft version of 14 January 2014 for the Electricity cross-border Committee[6]. A high level of coordination between different CoBAs throughout the whole integration process is essential to create an unhindered path towards the target model[7].

1.1.2. Obligations on TSOs to implement the integration models for balancing energy

The Framework Guidelines have defined a set of comprehensive requirements on TSOs to facilitate the progressive development of cross-border exchanges of balancing energy in the European Union. The scope of these provisions is threefold: (i) the netting of imbalances when economically efficient, the exchanges of balancing energy from (ii) replacement reserves ("RR") and from (iii) frequency restoration reserves ("FRR").

Firstly, the Framework Guidelines have introduced the obligation to implement an imbalance netting process within the regional and European integration models which should be imposed on all TSOs. The netting of imbalances between different responsibility areas can reliably reduce balancing needs and generate significant overall benefits.

Secondly, all TSOs which are using RR and FRR[8] processes for balancing purposes should implement the regional and European integration models for the exchanges of the respective balancing energy. The Network Code on Load-Frequency Control and Reserves developed by ENTSO-E[9] ("NC LFC&R") envisages an optional and flexible approach with regard to the use of FRR and RR; however the Network Code needs to establish clear obligations to implement all integration models. The Agency supports the development of implementation frameworks, pursuant to Articles 12 to 19 of the Network Code, to be approved by NRAs, provided that they define which TSOs shall be obliged to implement the corresponding integration models for the exchanges of balancing energy bids based on the processes they use according to the NC LFC&R. Nevertheless, the Agency believes that Articles 12 to 19 of the Network Code remain insufficient to ensure enforceability of the integration models as they are inconsistent with the optional and flexible approach defined in the NC LFC&R. The Agency requests the drafting of a stable and robust framework of legal obligations on TSOs to implement integration models according to this Network Code in concurrence with the NC LFC&R. This framework shall also in particular ensure that all TSOs are obliged to

[6] http://ec.europa.eu/energy/gas_electricity/electricity/doc/20140114_cacm.pdf
[7] This remark may also be relevant with regard to the development of balancing pilot projects in the coming years.
[8] The Agency recognises that the integration models for automatically-activated FRR and manually-activated FRR refer to different balancing products used in the mandatory FRR process.
[9] https://www.entsoe.eu/fileadmin/user_upload/_library/resources/LCFR/130628-NC_LFCR-Issue1.pdf

implement both integration models for the exchange of balancing energy from manually-activated and automatically-activated FRR.

Thirdly, the definition of CoBAs should be consistent with the regional and European integration models, as well as with the provisions for the exchange of balancing capacity. This implies that a CoBA can only be established for the purpose of the imbalance netting process or for the purpose of exchanging all balancing energy or balancing capacity products related either to RR, manually-activated FRR ("mFRR") or automatically-activated FRR ("aFRR"). This also implies that when a CoBA is established for exchanging balancing energy (respectively balancing capacity) for aFRR/mFRR/RR, all the balancing energy[10] (respectively balancing capacity) products related to aFRR/mFRR/RR should be exchanged within such CoBA.

The Agency is aware that there can be different ways for TSOs to use their process activation structure to perform balancing in a cost-efficient manner. For a stepwise achievement of pan-European balancing markets, the use of balancing energy bids related to any process included in the process activation structure in CoBAs should not be unduly restricted[11]. Thus, the Agency believes that the framework for an exemption in the form of a TSO-BSP model for the exchange of balancing energy bids related to the RR process is a sensible approach provided that it can only affect those TSOs that do not use this process for the purpose of balancing. Moreover, the competent NRAs should be entitled to decide that relevant TSOs that do not use this process shall be obliged to allow (within a specified timeframe) the BSPs from their responsibility area to offer the related balancing energy bids via a BSP-TSO model to TSOs that do use them.

1.1.3. Clear and ambitious implementation timelines

The Framework Guidelines have established a set of implementation milestones to pave the way towards the achievement of pan-European integrated balancing markets with extensive cross-border exchanges of balancing energy from RR and FRR. The timelines provided in the Framework Guidelines are the result of a balanced approach between different interests and expectations of involved parties. The Agency acknowledges ENTSO-E's indicative implementation plan described in the supporting document, but considers that the Network Code should fully reflect the implementation timeframes established in the Framework Guidelines, which take into account both (i) the necessary ambition to achieve the Internal Market for Electricity without undue delay and (ii) the need to gain more experience with integration projects, while guaranteeing a satisfying level of operational security for the

[10] Excluding unshared bids.
[11] Regardless of the definition of future standard and specific products to be proposed by TSOs.

European electricity system. In this respect the Network Code is not in line with the Framework Guidelines, notably regarding (i) the implementation of the regional integration models, and (ii) the proposals for and the implementation of the European integration models for RR and FRR. A clear and firm timeline towards the achievement of the target models is essential for TSOs, NRAs, the Agency and other stakeholders to be able to make sound decisions and economically efficient adaptations of their activities. To ensure this, the Agency suggests that all the implementation milestones should relate to an assumed date of entry into force of the Network Code in September 2015 and that, depending on the actual date when the Network Code enters into force, the deadlines should be adapted accordingly.

1.1.4. A consistent framework for the exchange of balancing capacity and sharing of reserves

The Framework Guidelines have called for the elaboration of a clear legal framework for the exchange and sharing of reserves. The Agency is convinced that the development of a well-designed cross-border market for exchanging and sharing reserves is likely to bring significant savings[12] and contribute to the fulfilment of the general objectives pursued by the achievement of the Internal Electricity Market. The Agency would therefore support the establishment of a framework which ensures that TSOs are encouraged to further develop the exchanges of balancing capacity, where appropriate. To do so, the TSO-TSO model with common procurement process forms the most efficient way to achieve the general objectives of this Network Code. The Agency acknowledges, however, the importance to maintain the existing BSP-TSO models until an efficient TSO-TSO model is implemented and fully operational. Therefore the Network Code should:

a) oblige TSOs using BSP-TSO models to exchange balancing capacity, to replace them with more efficient TSO-TSO models no later than the implementation time of the European integration models as described in the Framework Guidelines;
b) require that the TSOs that have not implemented exchanges of balancing capacity at the implementation time of the European integration models provide a clear justification why such exchanges have not been implemented;
c) in addition, foresee the report published by ENTSO-E not only "*assess[ing] the development of exchanges of balancing capacity*", but also describing the concrete prerequisites and actions that are needed to implement the TSO-TSO model to exchange balancing capacity.

[12] Impact Assessment on European Electricity Balancing Market, March 2013, Contract EC DG ENER/B2/524/2011: "The German GCC scheme claims savings of approximately €100 million/ year because of common dimensioning of reserves".

Moreover, the Agency recognises that the technical framework for the sharing of reserves is defined in the NC LFC&R, and that this option is also mentioned in this Network Code. However, the Agency considers that a proper description of the legal and economic framework is needed in the Network Code to facilitate wider application of this possibility and to be in line with the Framework Guidelines. The Agency is convinced that sharing of reserves will bring significant costs savings to the involved TSOs and is concerned that the Network Code does not provide any incentive or obligation on TSOs to pursue this possibility. The Network Code should at least oblige TSOs to regularly investigate the possibilities to share the reserves and report or make proposals to the relevant NRAs.

The Network Code also introduces a new way of allocating (reserving) cross zonal capacities for the exchange of balancing capacity. The Agency recognises that this may lead to an increase in economic efficiency and social welfare. However, given that cross-border markets in balancing capacity cannot yet be considered as efficient, utmost care and precautions should be taken to ensure that any reservation of cross-zonal capacity is efficient. To begin with, the Agency is concerned about the use of forecasting methods to assess the efficiency of such reservation in particular when both elements needed to assess efficiency, i.e. the value of cross-zonal capacity for exchange of balancing capacity and for exchange of energy, are obtained on the basis of forecasts. Secondly, the Network Code should elaborate more on the scope of the development and regulatory approval of these methodologies. In particular the Agency suggests that the methodology for co-optimisation should be developed and approved at EU level because it may affect the common capacity allocation algorithms. The methodology for market-based reservation or methodologies based on economic efficiency analysis should at least be developed and approved within capacity calculation regions as defined in the working draft NC CACM of 14 January 2014[13], since they represent the areas that adequately identify the TSOs that are affected by the physical (e.g. flows) or financial (e.g. firmness costs, congestion rent) elements related to such reservation. Finally, the Network Code should also define which reservation method will require regulatory approval of both the related methodology and each reservation decision and which reservation method will require only the approval of the related methodology.

1.2. The interaction with other Operators

1.2.1. Cooperation among System Operators

The Framework Guidelines require TSOs to establish a proper framework for coordination with other system operators (neighbouring TSOs, distribution system operators or gas system

[13] See footnote 6.

operators) when elaborating the terms and conditions related to balancing. While the Network Code addresses the coordination with other TSOs and Distribution System Operators ("DSOs") to some degree, it does not provide for coordination with gas system operators, although interactions between gas and electricity balancing markets can exist[14]. Furthermore, the Network Code, while maintaining a non-discriminatory approach for cooperation among TSOs, does not ensure non-discrimination when providing the cooperation framework with DSOs, in particular with relation to the definition of rules and the allocation of costs related to balancing. The Network Code provisions on cooperation with DSOs as well as other network codes should also ensure that DSOs receive all data from BSPs which are necessary to evaluate the balancing service provided, at both the pre-qualification stage and real-time operation of the system, without hindering the participation of smaller units. The Network Code should also specify the role of DSOs in imbalance calculations in particular with respect to metering and data delivery in order to ensure that DSOs are obliged to contribute to the imbalance settlement and contribute to delivering adequate and timely information to BRPs.

1.2.2. Delegation and assignment of balancing functions

The Agency understands that TSOs should be competent for all functions related to the two core tasks of TSOs under this Network Code, namely ensuring operational security and integrating balancing markets. In this respect the Network Code should be sufficiently clear that only TSOs are responsible for these two tasks. The Agency suggests that the Network Code also defines the specific functions, which do not have significant influence on operational security or integration of balancing markets and can be assigned, along with the related responsibilities, to a third party through an administrative decision by the NRA or by a Member State through relevant national legislation. The Agency believes that when the responsibility for the performance of a function is transferred to a third party, the Network Code should specify that the third party meets all relevant requirements that are applicable to the TSOs and that the transfer to a third party does not create any barriers to European integration.

1.3. Stakeholders' involvement, transparency and monitoring

The Network Code does not provide a consistent framework for consultation of the proposals for methodologies or terms and conditions. The Agency believes that all proposals that are subject to regulatory approval shall be subject to public consultation unless it is duly justified that the proposal in question has no influence on market participants. As the Network Code

[14] European Commission, Study on Synergies between Electricity and Gas Balancing Markets, October 2012. http://ec.europa.eu/energy/gas_electricity/studies/doc/20121220_ebegs_final_report.pdf

defines the adoption of some very important elements of the integrated balancing markets at a later stage, the consultation on these elements should be longer than 4 weeks: a non-exhaustive list of such important elements include the modifications of integration models, the harmonisation of standard products, the imbalance settlement, the pricing of balancing energy as well as the terms and conditions related to balancing. Finally, the Agency requests that the consultation framework in this Network Code is aligned with the consultation framework in the NC CACM.

The Network Code should consistently ensure that all the proposals that are subject to regulatory approval are also published. With respect to the monitoring obligations of the Agency, the Network Code should ensure the right for the Agency to request relevant information for monitoring the implementation of this Network Code pursuant to Article 8(9) of Regulation (EC) No 714/2009.

The Framework Guidelines also introduced extensive requirements on reporting related to the integration and efficiency of balancing markets, which are to a large extent outlined in Article 67 of the Network Code. The Agency sees the need for the provisions of Article 67 to be reviewed to better reflect the Framework Guidelines requirements and the comments raised in this Opinion. The Network Code could define the high-level requirements for the report pursuant to Article 67 (based on the requirements of the Framework Guidelines) while leaving some freedom for ENTSO-E to further define detailed structure and indicators in line with the high level requirements. The Network Code should require ENTSO-E to consult the Agency on the detailed structure and indicators used and include the possibility for the Agency to require amendments.

2. Economic efficiency considering security of supply constraints: principles for well-functioning balancing markets

Increasing economic efficiency is one of the key drivers for the integration of balancing markets and should be pursued while maintaining operational security. The Agency believes that economic efficiency in electricity balancing markets can be increased by means of:

a) incentives on BRPs to balance themselves or to help balance the electricity system;
b) competition (in particular across borders) in providing balancing services;
c) optimising balancing actions performed by the TSOs.

The Network Code lacks ambition in facilitating these three objectives.

2.1. Incentives on Balance Responsible Parties

2.1.1. Towards coherent and efficient short-term markets

The Network Code should define incentives for BRPs to balance themselves as much as possible and as close as possible to real-time, and for keeping and/or helping to restore the system's balance. The Network Code should, together with the NC CACM, facilitate liquid intraday markets close to real time where BRPs can efficiently balance their portfolios. In addition, TSOs should provide the necessary information to BRPs so as to enable them to support the system's balance. In this respect, the Agency is concerned that the Network Code does not respect the maximum lead time (one hour) for gate closure time defined in the Framework Guidelines, and:

a) allows TSOs to balance the system within the intraday market timeframe;
b) allows TSOs to define the balancing energy gate closure time before the closure of the intraday market;
c) allows TSOs from central-dispatch systems to define unilaterally the gate closure time for submission of Integrated Scheduling Process bids without coordination.

The Agency considers that the provisions in the Network Code having the effects referred to in points a), b) and c) above deviate from the general principles and requirements laid down in the Framework Guidelines and, if allowed in the Network Code, should be accompanied with stringent conditions and a process to justify, consult and approve those exemptions by the relevant NRAs. This implies, in particular, specifying where and why it is necessary to create an overlapping of the intraday and balancing markets by activating balancing resources before the intraday gate closure, and identifying which limitations are consequently imposed on participation in the intraday market.

2.1.2. *Transparency of information to facilitate self-balancing and support system's balance*

The Network Code does not ensure publication of all information required to ensure an economically-efficient functioning of balancing markets and to provide symmetrical information to all interested market parties. In particular, the Network Code should oblige TSOs to publish volumes and prices of all balancing energy bids and all activated balancing energy bids in the previous imbalance settlement period. The Network Code should oblige TSOs to publish the necessary information that is needed for BRPs to be able to help balance the system and/or restore its balance, such as the system imbalance shortly after real time.

2.1.3. *Requirements on the main features of imbalance settlement*

The Agency is concerned by the lack of clear requirements on some of the key features of the imbalance settlement processes. The following concerns have been identified:

a) The Network Code shall clearly reinstate the principle from the Framework Guidelines that "*all injections and withdrawals shall be covered by balancing responsibility*" as a general principle of imbalance settlement;
b) The Network Code should specifically require that renewable energy resources shall be financially responsible for their imbalances;
c) The Network Code allows TSOs to include other costs in the imbalance settlement which may imply an allowed return related to balancing. The Agency is concerned about including any non-identified costs related to balancing in the settlement procedures, as (i) this provides freedom to place the responsibility on BRPs to support costs they may not be the real originators of, and (ii) it does not provide clarity on the interaction with eligible TSO costs according to revenue regulation in each national system. Therefore the Agency believes that the Network Code should specify the nature of the costs to be included in the financial outcome of the settlement in a clear and transparent way;
d) Regarding the settlement of the exchanges of energy between TSOs, the Agency believes that the prices to settle intentional and unintentional exchanges should be linked and should reflect balancing energy prices;
e) The Network Code allows too much flexibility in terms of harmonisation of imbalance settlement periods. The Agency is worried that the Network Code allows for a general exemption from harmonising the imbalance settlement period without any time limitation. The Agency suggests that such exemptions, when justified, should be limited in time;
f) In cases where harmonisation of the imbalance settlement period leads to changes of the imbalance settlement period, the Network Code should ensure consistency between the imbalance settlement period and the program time unit to encourage

BRPs to be balanced as close to real time as possible or help the system to restore its balance.

2.2. Competition between Balancing Service Providers

2.2.1. Non-discriminatory access to balancing markets

The provisions affecting the future balancing markets arrangements must ensure a level playing field for all market participants.

First of all, the Network Code does not provide clarity that BSPs without having a contract for balancing capacity should always be allowed – after being (pre)qualified – to provide balancing energy bids to TSOs.

Moreover, the Framework Guidelines have defined a set of important requirements for BSPs which are deemed necessary for well-functioning balancing markets. These requirements are broadly captured by the provisions of the Network Code, but the Agency believes that the following should also be considered:

a) The principles of the procedure to become a BSP (qualification) should be described;
b) The Network Code should require that the terms and conditions related to balancing "*include reasonable and justified requirements for BSPs*";
c) While BSPs should provide all the necessary data and information needed by the system operators to evaluate the balancing service provided, the Agency is of the opinion that such an evaluation should be based on common principles to be included in the Network Code, to ensure a level playing field for all BSPs.

In addition, the Agency supports the establishment of clear and fair principles regarding the interaction between BSPs and BRPs. In particular, all interactions between a (possibly independent) BSP and the concerned BRP(s) should be carefully taken into consideration by the TSO, notably to ensure fair competition between all participants in balancing markets. In this respect, a mitigation of costs and risks for both parties may be insufficient. The Agency welcomes a clear definition of the imbalance adjustments used to evaluate the concerned BRPs' imbalances, but the Network Code should better clarify the principles for settling the volume of activated balancing energy bid, where applicable.

2.2.2. Facilitating the participation of flexible balancing resources and renewables

Due to increasing penetration of intermittent generation in Europe, there is an increasing focus on promoting flexibility (including storage, demand response and distributed generation) and participation of renewable energy sources. For this reason, it is essential that

future balancing market rules and imbalance settlement rules build an adequate framework for these sources to fully contribute to balance the electricity system.

While the Network Code does provide general principles that allow for participation of flexible balancing resources and renewables in balancing markets, the Agency is of the opinion that the Network Code does not provide an adequate framework that would facilitate greater participation of these sources. The following concerns were identified in this respect:

a) Within general principles for defining standard products, the Network Code should facilitate participation of flexible and renewable resources;
b) The option to procure balancing capacity in long timeframes and long in advance of the delivery period and the option to link upward and downward procurement should ensure that it does not hinder the participation of flexible and renewable resources;
c) Among the characteristics of standard products, locational information is also required. While the Agency understands that locational information is needed for the purpose of congestion management and other local ancillary services, such provision might be understood very widely and might be detrimental to the participation of small units. The Network Code should provide more clarity and certainty about which kind of locational information is needed and ensure that this requirement does not unduly hinder participation of smaller units.
d) The Network code allows a generic exemption for central-dispatch systems to allow the aggregation of units. While it is understandable that some restrictions on aggregation may be defined by TSOs when these units (depending also on their location) have significant impact on the electricity system, the Agency understands that this applies equally to self-dispatch or central-dispatch systems. Since Article 26(6) of the Network Code allows TSOs to define the conditions for aggregation, which can include some specific restrictions, an additional generic exemption for central-dispatch systems lacks justification.

2.2.3. Definition of balancing energy gate closure time

While the current version of the working draft NC CACM of 14 January 2014[15] defines a maximum intraday market gate closure lead time, the Network Code is rather open in relation to the balancing energy gate closure times. The Framework Guidelines have specified that the Network Code "*shall allow BSPs to place and/or update their bids as close to real time as possible and at least up to one hour before real time*. The Network Code does not respect this maximum lead time (one hour) for gate closure time and provides freedom to TSOs to define balancing energy gate closure time long before the gate closure time of the intraday market.

[15] See footnote 6.

Moreover, the Agency is concerned that the definition of a common gate closure time for each standard product may adversely affect the functioning and liquidity of balancing markets. In identifying the gate closure time, the Agency understands that there is a compromise to be found between flexibility and liquidity, where (i) multiple gate closure times would privilege flexibility while (ii) a single gate closure time would privilege liquidity. The Agency deems it necessary to identify a more balanced solution[16].

In addition, the Network Code gives the possibility to each central-dispatch system to set its own gate closure time for submission of balancing energy bids (in a form of integrated scheduling process bids) without respecting the maximum time defined in the Framework Guidelines. Such unilateral decisions create a non-level playing field for BSPs from central-dispatch systems with respect to allowing them to place and/or update their bids as close to real time as possible as stated in the Framework Guidelines. Thus the Agency believes that it is necessary that a sufficient level of harmonisation is requested also for these systems.

2.2.4. Pricing of balancing energy

The method to price balancing energy has also an important impact on the competition between BSPs and the overall efficiency of balancing markets. The Agency considers that the harmonisation of the pricing methodology for all balancing energy standard products is essential and is clearly required by the Framework Guidelines. The Agency also expects that the pay-as-cleared method provides the right incentives for BSPs to offer balancing services and BRPs to be balanced or to help the system to balance.

The Network Code currently defines the pricing method only for those standard products for balancing that are exchanged within a CoBA, whereas the scope defined by the Framework Guidelines is intended to affect all the products activated for balancing purposes. The Agency recognises the need for care and for a stepwise approach to implement this method, to take specific concerns related to non-competitive markets (e.g. market power) into account. However, with the gradual integration of national balancing markets, these concerns should become less relevant and the implementation of the pay-as-cleared method less questionable. Thus, the Network Code may benefit from the definition of an implementation process encompassing the different implementation milestones related to the development of regional and European integration models.

[16] Solutions which limit diversification and identify at least common gate closure times for each key type of products (i.e. based on mFRR, aFRR, or RR) could be investigated.

2.2.5. *Definition and use of balancing products*

The competition in balancing markets is heavily dependent on the possibility for BSPs to compete in providing comparable balancing services. For competition to develop, a certain level of standardisation of balancing services is needed in order to avoid fragmentation of products and markets. In this respect, the following provisions of the Network Code are of concern to the Agency:

a) The Network Code does not focus enough on harmonisation and avoidance of market fragmentation when defining products. In particular, the Network Code should go beyond a mere repetition of the Framework Guidelines and define the criteria and principles that would ensure sufficient harmonisation of products and non-fragmentation of the balancing market;
b) The Network Code should be more prescriptive in defining the number of CMOLs that TSOs may create. The Agency expects that competition should be enhanced by minimising not just the amount of standard products, but also the number of CMOLs on which these standard products compete;
c) The Network Code gives too much flexibility on TSOs to define specific products. To the Agency's understanding, the proposal from TSOs for defining specific products should be complemented with thorough justifications with respect to the requirements defined in the Network Code and with a proper cost-benefit analysis. When defining specific products, TSOs should also define which process and which CMOL shall be used to exchange these specific products. Finally, the Network Code does not consistently require that specific products should also be available for exchanges with other TSOs. Specific products should consistently be submitted to relevant CMOLs; however, they can be marked as unavailable if they are defined as part of unshared bids or because activation by other TSOs is not possible. To this end, the Network Code should align the definitions of standard and specific products to the above stated principles;
d) The Network Code also lacks clarity with regard to the characteristics of standard products, since it does not distinguish between key standard characteristics that define a standard product (e.g. full activation time), and other information that needs to be submitted to TSOs when providing balancing services (e.g. divisibility).

2.2.6. *Efficient framework for the procurement of balancing capacity*

The Agency understands that from the perspective of this Network Code, the operational security is maintained by TSOs when the amount of available balancing energy bids is always sufficient to balance the electricity system and to fulfil the requirements for load frequency control defined in the NC LFC&R. The Agency also understands that the reserve capacity as defined in the NC LFC&R corresponds to the minimum amount of balancing energy bids that

must be available to TSOs. However, there are different ways for TSOs to ensure that the amount of balancing energy bids is sufficient. The procurement of balancing capacity should be understood as only one option that guarantees that the BSPs with a balancing capacity contract will always submit the required volume of balancing energy bids to the TSO. In this respect, the Framework Guidelines require that in order to reduce the amount of procured balancing capacity, TSOs should take into account (i) the possibility of collecting balancing energy bids from BSPs without a balancing capacity contract, (ii) the amount of bids that are always available to them due to integrated balancing energy markets and (iii) the sharing of reserves. The Network Code should oblige TSOs to take these elements into account when calculating the volume of procured balancing capacity.

The Agency is also concerned about the timeframes in which the procurement of balancing capacity takes place, since they may not enable a level playing field between all BSPs. While the Framework Guidelines require that TSOs procure as much balancing capacity as possible in the short term, the Network Code allows for balancing capacity to be procured up to two years in advance (e.g. yearly contracts settled one year before the delivery starts). The Agency is convinced that procurement in shorter timeframes will lead to lower volume requirements (due to better forecasting of needs) and more competition between BSPs. Thus, the Network Code should reinstate the principle to procure as much balancing capacity as possible in the short term and define a maximum timeframe (both for procurement within responsibility area and within CoBA), which is more reflective of the principles stated in the Framework Guidelines.

Nevertheless, at this stage the Agency does not see the need to prohibit in the Network Code longer procurement timeframes for a limited amount of balancing capacity as long as the Network Code is clear that such exceptions from the general principle should only be allowed for the balancing capacity procured within a responsibility area, to avoid the risk of non-harmonisation, and should be thoroughly justified in terms of economic efficiency and operational security before it can be approved by the NRA.

The Agency is also concerned that the Network Code defines different frameworks for primary procurement of balancing capacity and secondary market (transfer) for balancing capacity. The Network Code does not ensure that BSPs can transfer balancing capacity obligation to another BSP while respecting the key principles that are provided in the primary procurement. To the Agency's understanding, the rules of the secondary market for balancing capacity should correspond to the rules for the primary procurement of balancing capacity. The Agency expects that the terms and conditions for BSPs related to balancing capacity should define consistent rules for primary procurement and transfer of balancing capacity.

2.3. Optimising balancing actions of TSOs

2.3.1. Optimising the activation of balancing resources

The process of balancing the electricity system within a responsibility area is a clear responsibility of individual TSOs. However, the Network Code does not fully reflect the Framework Guidelines when providing TSOs with key principles to optimise balancing actions. The Network Code does not provide sufficient clarity on the principles for the development of balancing algorithms pursuant to Article 65 of the Network Code and does not ensure the involvement of NRAs in the approval of these common principles. The Agency believes that high level principles for the development of balancing algorithms should be defined in the Network Code.

With respect to optimising balancing actions by TSOs, the Network Code should in particular oblige TSOs to coordinate and optimise the use of mFRR and RR in cases where TSOs use both types of resources to perform balancing.

In addition, the Agency is concerned about the principles that affect balancing energy bids coming from procured balancing capacity which can be activated only a limited number of times per contract period. While it is acceptable that the activation of such bids should to the maximum possible extent reflect relative scarcity, the Agency sees no reason to place them systematically at the end of the concerned CMOL.

2.3.2. Ensuring operational security

The Network Code further develops the principle of unshared bids laid down in the Framework Guidelines. The Framework Guidelines allow for unshared bids as long as the concerns about the security of supply are justified and demonstrated. The Network Code should thus be clear that the TSOs justify the application of unshared bids when submitting a proposal to NRAs to approve them. Furthermore, the consistency with the Framework Guidelines should be ensured in the following aspects:

a) The link to the amount of balancing capacity should be more detailed. In particular the condition that the volume of unshared bids shall not be higher than the amount of procured balancing capacity should apply to aFRR, mFRR and RR separately;
b) For the purpose of transparency, all balancing energy bids shall be shared within CMOL, whereas unshared bids can be marked unavailable for activation by other TSOs. This also includes specific products, which should be shared in CMOL, but when they are marked as unavailable for activation by other TSOs, they shall be considered as part of unshared bids;

c) The volume of unshared bids should take into account the availability (e.g. using a statistical or probabilistic approach) of the balancing energy bids from the CMOL;
d) The frequency of the publication of the volume of unshared bids should be explicitly included in Article 7.

The Network Code, while defining the TSO responsibilities for balancing the electricity system, often overlaps with TSO responsibilities for operational security in general and, in particular, congestion management in real time. The Agency is concerned that the extended application of this Network Code is not described more thoroughly. The Network Code provides the development of a methodology for defining the purpose of activation of balancing energy bids. The scope of this methodology should be broadened to the degree that it defines all the interactions between activations for maintaining the active power balance and activations for non-balancing purposes and should be approved by all NRAs.

Finally, with respect to operational security, the Agency is concerned about the non-application of certain articles of the Network Code in case of alert state as defined in the Network Code on Operational Security developed by ENTSO-E[17]. While it is understandable that normal market operations could not be maintained in emergency state, an alert state is, in the Agency's understanding, a situation where increased attention and effort is needed on the side of TSOs; however the market operations should not be affected in any way. Furthermore, excluding these articles from application in case of alert state would require a specific network code for alert state or at least specific provisions in this Network Code explaining and defining which rules shall apply in alert state instead of these articles.

2.3.3. Balancing within central-dispatch systems

The Framework Guidelines have stated that the Network Code *shall take into account the parallel existence of central dispatch and self dispatch arrangements*. The Agency acknowledges ENTSO-E's effort to define specific provisions which would apply to central-dispatch systems (modification of bids, integrated scheduling process, etc.), but is convinced that the Network Code needs to provide more clarity on how the key arrangements of these balancing markets (e.g. gate closure times) will be made compatible to ensure that the integration process will embrace both central and self-dispatch systems to the maximum possible extent.

[17] https://www.entsoe.eu/fileadmin/user_upload/_library/resources/OS_NC/130924-AS-NC_OS_2nd_Edition_final.pdf

3. Other issues

3.1. A set of comprehensive common rules and methodologies is essential

The Agency is concerned that the lack of well described methodologies or terms and conditions risks putting in danger the effective future integration into a European balancing market. The Agency considers it reasonable that some technical details are left to the implementation phase in order to limit the complexity of the Network Code and to provide flexibility for these details to change on a periodic basis. Still, the Agency expects ENTSO-E to provide in the Network Code a solid framework for later development and adoption of the terms and conditions or methodologies related to balancing.

The Agency is convinced that a deeper description of the terms and conditions or methodologies related to balancing is needed in the Network Code. The Network Code should not limit itself to define the list of different terms and conditions or methodologies that shall be developed, but should also detail at least well defined and clear principles and criteria for developing these terms and conditions or methodologies. A few examples of provisions that need to be accompanied by criteria and principles for development include:

a) the development of algorithms to be applied for the different functions;
b) the methodology for adopting the probabilistic approach in order to ensure the availability of cross-zonal capacity;
c) the settlement rules related to RR, aFRR, mFRR and imbalance netting processes.

3.2. Regulatory approvals

The Agency welcomes the approach undertaken in other network codes to aggregate all regulatory approvals into one single article. To this end, the Agency expects the regulatory approval process to be aligned with the process in other network codes once they are adopted. For this reason, the approval process itself is not addressed in this Opinion. In the following, only the scope of regulatory involvement is analysed and addressed:

a) The Network Code introduces several different geographical scopes of coordination processes for TSOs and NRAs. The Network Code should improve the clarity of which terms and conditions or methodologies shall be coordinated at which geographical scope. In particular, the difference between the approvals in Article 6(5) and 6(6) should be clearer;
b) The Agency understands that the decision of a TSO to operate a self-dispatch or central-dispatch system will have a significant impact on the integration of balancing markets. While the Network Code allows TSOs to ask their respective NRAs to be acknowledged as central-dispatch system, the Network Code in principle also allows

any TSO to switch from self-dispatch to central-dispatch system or vice versa even during the implementation of regional and European integration projects. Since this provides uncertainty for all parties involved in implementation projects, the Network Code should ensure more certainty and stability with this respect;

c) The Agency suggests that the rights for TSOs to review and make a new proposal to NRAs should be concentrated into one single article or paragraph;
d) The common article on regulatory approvals should also include references to the methodology for the probabilistic approach, the methodology for co-optimisation process of cross zonal capacity and the proposal for harmonisation of imbalance settlement.

3.4. Clarity and legal robustness

In order to avoid any misunderstanding or conflict of interpretations, the Agency would like to emphasise the importance of drafting the provisions to the highest level of precision, and to ensure the consistency of each article of this Network Code with the Framework Guidelines. Moreover, it is essential that the Network Code defines a self-standing legal framework and that the interpretation of the provisions stated therein does not rely on the non-binding supporting document.

The Agency also recommends ENTSO-E to carefully assess which definitions and concepts of the NC LFC&R are relevant in this Network Code, and to remove any item which is not appropriate.

Finally, the Agency recommends ENTSO-E to further align this Network Code with the network codes related to the system operation, once they are finally adopted. Definitions and concepts common to these network codes must be fully consistent.

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