European Network of
Transmission System Operators
for Electricity

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Energinet, Fingrid, Statnett and Svenska kraftnät proposal in accordance with Article 33(1) and Article 38(1) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing

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Energinet, Fingrid, Statnett and Svenska kraftnät, taking into account the following,

Whereas

(1) This document is a common proposal developed by the Transmission System Operators Energinet, Fingrid, Statnett, and Svenska kraftnät (hereinafter referred to as "TSOs") in the geographic area covering Nordic synchronous area regarding a proposal for the establishment of common and harmonised rules and processes for the exchange and procurement of aFRR capacity in accordance with Article 33(1) of Commission Regulation (EU) 2017/2195 of 23 November establishing a guideline on electricity balancing (hereafter referred to as the "EB Regulation") and regarding a proposal for the application of market-based allocation process in accordance with Article 38(1) of the EB Regulation. This proposal is hereinafter referred to as the "Proposal".

(2) The Proposal takes into account the general principles and goals set in the EB Regulation as well as the Commission Regulation (EU) 2017/1485 of 2 August 2017 establishing a guideline on electricity transmission system operation (hereafter referred to as "SO Regulation"), Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a guideline on capacity allocation and congestion management (hereafter referred to as "CACM Regulation), and 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 (hereafter referred to as "Regulation (EC) No 714/2009").

(3) The goal of the EB Regulation is to establish an EU-wide set of technical, operational and market rules to govern the functioning of electricity balancing markets. It sets out rules for the procurement of balancing capacity, the activation of balancing energy and the financial settlement of balance responsible parties. It also requires the development of harmonised methodologies for the allocation of cross-zonal transmission capacity (hereafter referred to as "CZC) for balancing purposes. Such rules will increase the liquidity of short-term markets by allowing for more cross-border trade and for a more efficient use of the existing grid for the purposes of balancing energy.

(4) The TSOs are mutually willing to exchange aFRR capacity within the Nordic synchronous area and have developed common and harmonised rules and processes for the exchange and procurement of aFRR capacity. The exchange of aFRR capacity is based on a TSO-TSO model taking into account the available CZC and the operational limits as defined in the SO Regulation.

(5) The TSOs will set capacity procurement process and aFRR capacity bids are submitted to the platform establishing capacity procurement optimisation function. Procurement of upward and downward aFRR capacity is carried out separately. To secure this exchange of aFRR capacity the TSOs will allocate CZC using market-based allocation process. The Proposal shall define the bidding zone borders included, the market timeframe, and duration of application.

(6) The TSOs allocate CZC for the exchange of aFRR capacity when CZC is calculated in accordance with capacity calculation methodologies developed pursuant to the CACM Regulation. This will occur when the TSOs implement flow-based approach in accordance with

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capacity calculation methodology developed in accordance with Article 20(2) of the CACM Regulation. Until the flow-based approach is implemented the capacity calculation will be based on the current net transmission capacity approach.

(7) The TSOs ensure both the availability of CZC and that the operational security requirements set out in the SO Regulation are met. This is ensured by market-based allocation of CZC for the exchange of aFRR capacity and described in separate proposal developed in accordance with Article 41(1) of the EB Regulation. In addition, the TSOs are not allowed increase the reliability margin due to the exchange of aFRR capacity.

(8) The TSOs shall publish, as soon as it becomes available, information on offered volumes and prices of procured aFRR capacity, as well as information on the allocation and use of CZC for the exchange of aFRR capacity.

(9) Article 5(5) of the EB Regulation requires that the expected impact of the Proposal on the objectives of the EB Regulation is described. The impact is presented below (points (10) to (16) of this Whereas Section).

(10) The Proposal contributes and does not in any way hamper the achievement of the objectives of Article 3 of the EB Regulation. In particular, the Proposal serves the objectives of fostering effective competition, non-discrimination and transparency in balancing markets (Article 3(1)(a) of the EB Regulation), enhancing efficiency of balancing as well as efficiency of European and national balancing markets (Article 3(1)(b) of the EB Regulation), integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security (Article 3(1)(c) of the EB Regulation), contributing to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets (Article 3(1)(d)) of the EB Regulation), ensuring that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue distortions within the internal market in electricity (Article 3(1)(e) of the EB Balancing), facilitating the participation of demand response including aggregation facilities and energy storage while ensuring they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility (Article 3(1)(f) of the EB Balancing) and facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation (Article 3(1)(g) of the EB Regulation).

(11) The Proposal fosters effective competition, non-discrimination and transparency in balancing markets (Article 3(1)(a) of the EB Regulation) by creating the regional Nordic market with common rules and processes for the procurement and exchange of aFRR capacity and application of market-based CZC allocation process for exchanging aFRR capacity. This Proposal together with the proposal developed in accordance with Article 41 of the EB Regulation creates the common Nordic platform for the procurement and exchange of aFRR capacity. The Nordic aFRR capacity market will contribute to non-discriminatory, effective cross border competition, market liquidity and a level playing field for aFRR capacity providers across the Nordic synchronous area. Transparency will be ensured by requirement set in this Proposal.

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(12) The Proposal enhances efficiency of balancing as well as efficiency of European and national balancing markets (Article 3(1)(b) of the EB Regulation) and contributes to the objective of integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security (Article 3(1)(c) of the EB Regulation) as the common Nordic aFRR capacity market together with application of the processes developed in accordance with Article 41 of the EB Regulation enhances efficiency of balancing by enabling effective and market-based allocation of reserves between scheduling areas within the Nordic synchronous area and contributing to operational security by improving the allocation of reserves necessary for secure balancing.

(13) The Proposal contributes to the efficient long-term operation and development of the electricity transmission system and electricity sector in the Union while facilitating the efficient and consistent functioning of day-ahead, intraday and balancing markets (Article 3(1)(d)) of the EB Regulation) since it establishes Nordic market for aFRR capacity and implements market-based CZC allocation process.

(14) The Proposal ensures that the procurement of balancing services is fair, objective, transparent and market-based, avoids undue barriers to entry for new entrants, fosters the liquidity of balancing markets while preventing undue distortions within the internal market in electricity (Article 3(1)(e) of the EB Balancing) since TSOs propose establishment of a common Nordic aFRR capacity market.

(15) The Proposal facilitates the participation of demand response including aggregation facilities and energy storage while ensuring that they compete with other balancing services at a level playing field and, where necessary, act independently when serving a single demand facility (Article 3(1)(f) of the EB Balancing) by establishing a common Nordic market place for aFRR capacity, where requirements for aFRR products can also be fulfilled by demand response, aggregation facilities and energy storages.

(16) The Proposal facilitates and does not hamper the participation of renewable energy sources to the Nordic aFRR capacity market and thus supports the achievement of the European Union target for the penetration of renewable generation (Article 3(1)(g) of the EB Regulation).

(17) In conclusion, the Proposal contributes to the general objectives of the EB Regulation to the benefit of all market participants and electricity end consumers.

SUBMIT THE FOLLOWING PROPOSAL TO RELEVANT REGULATORY AUTHORITIES WITHIN NORDIC SYNCHRONOUS AREA:

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TITLE 1
General provisions

Article 1
Subject matter and scope

1. The Proposal shall be considered as the common proposal from the TSOs for the establishment of common and harmonised rules and processes for the exchange and procurement of aFRR capacity (hereafter referred to as "Nordic aFRR capacity market") in accordance with Article 33 of the EB Regulation including rules for application of the market-based CZC allocation process in accordance with Article 38 of the EB Regulation.

2. The Proposal covers the bidding zones and bidding zone borders of the Nordic synchronous area, which corresponds to a LFC block (hereafter referred to as "Nordic LFC Block") as defined in accordance with Article 141(2) of the SO Regulation.

3. The TSOs shall notify Transmission System Operator Kraftnät Åland AB located in the same synchronous area about establishment of Nordic aFRR capacity market in accordance with Article 150 of the SO Regulation.

4. The proposal for the establishment of common and harmonised rules and processes for the exchange and procurement of mFRR balancing capacity (hereafter referred to as "Nordic mFRR balancing capacity market") in accordance with Article 33(1) of the EB Regulation shall be developed separately.

Article 2
Definitions and interpretation

1. For the purposes of the Proposal, terms used in this Proposal shall have the meaning of the definitions included in Article 2 of the EB Regulation, Article 3 of the SO Regulation and Article 2 of the CACM Regulation, Regulation (EC) 714/2009, Commission Regulation (EU) No 543/2013 of 14 June 2013 on submission and publication of data in electricity markets and amending Annex I to Regulation (EC) No 714/2009 of the European Parliament and of the Council (hereafter referred to as "Transparency Regulation") and Directive 2009/72/EC.
2. In addition, in this Proposal, the following terms shall have the meaning below:
    a) "market time unit (MTU)" means in this proposal the market time unit applied in the day-ahead market timeframe;
    b) "eligible balancing service provider (BSP)" means prequalified BSP in accordance with Article 18(5) of the EB Regulation participating in the Nordic aFRR capacity market.
    c) "exporting control area" means a control area that procure more aFRR capacity within the control area than demanded volume for that control area.
    d) "importing control area" means a control area that procure less aFRR capacity within the control area than demanded volume for that control area.

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e) "average cost of the imported aFRR capacity" means total cost of the aFRR capacity imported across all control areas of the Nordic LFC Block divided between importing TSO according to demanded volume.

3. In the Proposal, unless the context requires otherwise:

a) the singular indicates the plural and vice versa;
b) the table of contents and headings are inserted for convenience only and do not affect the interpretation of the Proposal; and
c) any reference to legislation, regulations, directive, order, instrument, code or any other enactment shall include any modification, extension or re-enactment of it then in force.

TITLE 2
Nordic aFRR capacity market

Article 3
Market timeframe for application of the allocation process and duration of application

1. The TSOs shall apply to the Nordic aFRR capacity market the market-based CZC allocation process in accordance with Article 41 of the EB Regulation.

2. The corresponding market-based allocation of CZC shall be determined together with the procurement of aFRR capacity two days (D-2) prior to the delivery day.

3. Duration of application of CZC allocation process in accordance with Article 41 of the EB Regulation shall be until a methodology for co-optimised allocation process of CZC for exchange of balancing capacity in accordance with Article 40 of the EB Regulation will be implemented by all TSOs.

Article 4
Prequalification of aFRR capacity

Each BSP participating in the Nordic aFRR capacity market shall be prequalified in accordance with Article 18(5) of the EB Regulation. Prequalified BSPs shall be eligible to submit aFRR capacity bids to the Nordic aFRR capacity market.

Article 5
High level design of the aFRR capacity market

1. The volume of aFRR capacity procured by TSOs consists of a separate volume for upward aFRR capacity and downward aFRR capacity. The volume to be procured is defined in accordance with Article 10.

2. There will be a daily auction of aFRR capacity for each MTU.

3. The TSOs shall establish a platform for the procurement of the aFRR capacity (hereafter referred to as "Platform").

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4. The gate closure time for eligible BSPs to submit aFRR capacity bids is 20:00 CET two days (D-2) prior to the delivery day.
5. The procurement optimisation function selects aFRR capacity bids and allocates CZC for the purpose of exchanging aFRR capacity in accordance with Article 11.
6. Accepted bids shall be notified to the relevant BSPs no later than 30 minutes after completion of the procurement,. The publication of the procurement results shall be in accordance with Article 13.
7. Accepted aFRR capacity bids shall be fully available for the aFRR energy activation during the delivery period.

Article 6
Characteristics of products and bids

1. The aFRR capacity bid shall include the following information:
   a) price of the bid in €/MW;
   b) volume of the bid in MW;
   c) MTU(s) for which the bid is valid;
   d) bidding zone for which the bid is issued;
   e) divisibility of the bid; and
   f) direction of the bid (upward balancing capacity or downward balancing capacity).

2. The aFRR capacity bid shall comply with the following requirements:
   a) minimum bid volume equals to 1 MW;
   b) the volume of the bid shall be divisible with 1 MW;
   c) only a bid with a bid volume less than 50 MW can be indivisible; and
   d) full activation time of the bids shall be set by each TSO in accordance with Article 159 of the SO Regulation, but full activation time shall not be longer than 5 minutes.
3. The following links between bids may be used:
   a) bids with same volume, direction and prices of consecutive MTUs can be linked, meaning that all these bids must either be rejected or accepted;
   b) an upward bid can be linked with a downward bid of the same MTU, meaning that both bids must either be rejected or accepted; and
   c) it will be possible to present a single upward or downward bid as a bid curve, where only one bid of the group of bids constituting the bid curve can be selected. Bid curves cannot be combined with linking of upward and downward bids.

Article 7
aFRR capacity bid submission

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1. Eligible BSPs or service providers delegated by eligibleBSPs are allowed to submit bids for aFRR capacity.
2. Bids shall be submitted to the Platform by gate closure time set in Article 5(3).
3. The bid format and communication protocol shall be in accordance with ENTSO-E data exchange recommendations. Latest versions of the recommendations shall be available at the TSOs' websites.
4. The TSOs shall be able to view all bids submitted for the Nordic aFRR capacity market.

Article 8
Settlement of procured aFRR capacity

1. Until the activation optimisation function with the activation of the aFRR capacity based on the Area Control Error of each bidding zone is established, the BSPs will receive an availability payment for each MTU in which the aFRR capacity bid is accepted. This availability payment is equal to the bid price multiplied with the accepted bid volume.
2. After the activation optimisation function with the activation of the aFRR capacity based on the Area Control Error of each bidding zone is established, the settlement of accepted aFRR capacity bids shall be based on cross-border marginal pricing (pay-as-cleared).

Article 9
Methodology for allocating CZC for Nordic aFRR capacity market

1. The TSOs shall ensure both the availability of CZC and that the operational requirements set out in the SO Regulation are met by applying market-based allocation process for allocating CZC to the balancing timeframe. The TSOs shall allocate the CZC to the Nordic aFRR capacity market in accordance with methodology pursuant to Article 41(1) of the EB Regulation.
2. The TSOs shall allocate CZC for the exchange of balancing capacity only if CZC capacity is calculated in accordance with the capacity calculation methodology developed pursuant to the CACM Regulation. The TSOs are allowed to apply net transmission capacity approach until flow-based approach, which is the approved capacity calculation methodology for CCR Nordic by regulatory authorities of CCR Nordic, is implemented in the CCR Nordic. The TSOs shall regularly monitor the efficiency of net transmission capacity approach compared to flow-based approach under development in accordance with methodology approved pursuant to Article 20(2) of the CACM Regulation and submit report to regulatory authorities of CCR Nordic accordingly.
3. The allocated CZC for exchange of aFRR capacity shall be taken into account in day-ahead and intraday capacity calculation timeframe as previously allocated CZC in accordance with methodology pursuant to Article 20(2) of the CACM Regulation.
4. The TSOs shall regularly assess whether the CZC allocated for the exchange of aFRR capacity is still needed for that purpose. When CZC allocated for the exchange of aFRR capacity is no longer needed, such CZC shall no longer be included as previously allocated CZC in the calculation of CZC.

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Article 10
The demanded volume of aFRR capacity

1. The TSOs shall define the reserve capacity requirements in accordance with Article 32(1) of the EB Regulation.
2. Each TSO is responsible for demanding the aFRR capacity necessary to fulfil the requirements set in accordance with Article 32(1) of the EB Regulation.
3. Each TSO shall inform the BSPs and other TSOs about the demanded volume of aFRR capacity in the bidding zone(s) of their control area, at the latest two hours before the gate closure time of the aFRR capacity market.

Article 11
Procurement optimisation function and bid selection for the aFRR capacity

1. The inputs to the capacity procurement optimisation function are:
    a) demand of aFRR capacity for each bidding zone;
    b) maximum procurement volume of aFRR capacity for a specific bidding zones, or a set of bidding zones. This can be included if necessary due to operational security pursuant to Article 165(3)(g) of SOGL;
    c) minimum procurement volume of aFRR capacity for specific bidding zones, or a set of bidding zones. This can only be used if the dimensioning process according to Article 157(2)(g) requires such limitations;
    d) bids from BSPs for each bidding zone;
    e) forecasted market value of CZC for each bidding zone border in the day-ahead market timeframe defined in accordance with methodology pursuant to Article 41 of the EB Regulation; and
    f) The maximum volume of CZC that can be allocated to exchange of balancing capacity in accordance with the methodology pursuant to Article 41 of the EB Regulation.
2. In the capacity procurement optimisation process, bid selection together with the CZC allocation are optimised to maximize socioeconomic welfare given the constraints defined in Article 11(1). The procurement optimisation shall minimise the overall costs of procuring the demanded volume of aFRR capacity. The overall costs include the cost of aFRR capacity bids and cost of allocating CZC to exchange of aFRR capacity calculated as allocated volume multiplied with forecasted market value of CZC for each bidding zone border.
3. The outputs from the capacity procurement optimisation function are:
    a) accepted bids for each bidding zone; and
    b) allocated CZC for exchange of aFRR capacity for each bidding zone border.
4. The TSOs shall not increase the reliability margin calculated in accordance with Article 22 of the CACM Regulation due to the exchange of aFRR capacity.

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Article 12
TSO-TSO settlement in the aFRR capacity market

1. Until the activation optimisation function with activation of aFRR capacity based on the Area Control Error of each bidding zone is established the TSOs will share the costs that arise from the procurement of the aFRR capacity. Cost allocation shall be according to a methodology where sharing of the costs are based on the principle that exporting control areas first fulfil their own aFRR capacity obligation with the cheapest available aFRR capacity bids, after which the remaining accepted bids from exporting control areas are transferred to importing control areas. Importing control areas pay the average cost of the imported aFRR capacity imported across all control areas of Nordic LFC Block.

2. After the activation optimisation function with the activation of the aFRR capacity based on the Area Control Error of each bidding zone is established, the exchange of aFRR capacity shall be settled to the average of marginal bid values in importing and exporting areas (middle price). In this model if there are no bottlenecks, the full exchange of aFRR capacity will be settled to the purchase price.

Article 13
Publication of information for exchange of aFRR capacity

The TSOs shall publish the following information for aFRR capacity in accordance with Article 12(3) of the EB Regulation:

a) offered volumes as well as offered prices of procured aFRR capacity bids for each bidding zone. The bid data shall be anonymised. This information shall be published to the market once market clearing results are available and no later than one hour after the accepted bids have been notified to the relevant BSPs;

b) the allocated CZC for the exchange of aFRR capacity for each MTU on the following day. This information shall be published after market clearing results are available together with the forecasted market values of CZC used as a basis for the allocation process at the latest 24 hours after the allocation and no later than 6 hours before the use of the allocated CZC. The information includes:

   i. date and time when the decision on allocation was made;

   ii. period of the allocation;

   iii. volumes allocated; and

   iv. market values used as a basis for the allocation process in accordance with Article 39 of the EB Regulation.

c) the information on the use of allocated CZC capacity for the exchange of aFRR capacity at the latest one week after the use of allocated CZC:

   i. volume of allocated and used CZC for each MTU and for each bidding zone border;

   ii. volume of released CZC for subsequent timeframes for each MTU and for each bidding zone border; and

   iii. estimated realised costs and benefits of the allocation process. The TSOs will, based on the aFRR capacity bid data, estimate the reduction in procurement costs compared to fulfilling the reserve requirements of the demanded FRR without allocating CZC for exchange of aFRR capacity. These estimated costs and benefits will be published as values for each day for the Nordic aFRR capacity market.

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TITLE 3
Final provisions

Article 14
Publication and implementation of the Proposal

1. The TSOs shall publish the Proposal without undue delay after relevant regulatory authorities within the Nordic synchronous area have approved the Proposal or a decision has been taken by the Agency for the Cooperation of Energy Regulators in accordance with Article 5(6), Article 5(7), Article 6(1) and Article 6(2) of the EB Regulation .
2. The TSOs shall implement the Proposal no later than 12 months after the approval by relevant regulatory authorities within the Nordic synchronous area or decision has been taken by the Agency for the Cooperation of Energy Regulators.
3. The TSOs shall implement the Proposal in co-operation enabling procurement and exchange of aFRR capacity in the Nordic LFC block.

Article 15
Language

The reference language for the Proposal shall be English. For the avoidance of doubt, where TSOs need to translate the Proposal into their national language(s), in the event of inconsistencies between the English version published by TSOs in accordance with Article 7 of the EB Regulation and any version in another language, the relevant TSOs shall, in accordance with national legislation, provide the relevant national regulatory authorities with an updated translation of the Proposal.

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