NBM
Nordic Balancing Model

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Questions and Answers

Nordic webinar - mFRR energy activation market - implementation guide

January 14, 2021

1. **Can the ramping period be faster than the standard one if a BSP can ramp faster?**

   The standard 10-minute ramp is the desired ramping profile. However, BSPs will be allowed to ramp faster as long as the ramping is symmetrical around start of the market period or the mid-point of the ramp. This point is equal to the time stamp in the activation order and 7,5 minutes after the time when the activation order was sent by the TSO. For scheduled activation the ramping should be symmetrical around the start and end of the 15-minute period.

2. **Is the ramp rate needed to be reported from the BSP if difference from standard?**

   No.

3. **What is the time between a BSP receives an activation and to when the ramp up/down is supposed to start?**

   The preparation time between the BSP receives the activation order and the start of the standard ramp is 2,5 minutes.

4. **Why is GTC the same for all quarters in one hour? (GTC is H-45 for all quarters in the coming hour for Automated operation pre 15-minute ISP period)**

   Until 15-minute ISP the bid GCT will be 45 minutes before the start of the hour. Example: for all quarter hours between 12:00 and 13.00 the BSP GCT will be 11:15.

   There are two main reasons why we propose to keep the balancing energy gate closure time to 45 minutes before the hour, instead of having separate GCT for each quarter hour in the period before the introduction of 15 min ISP:

1) The Day Ahead and Intraday Markets are still on an hourly resolution in this period. The complex bid attributes allow for sufficient flexibility for the BSPs. When ID goes to 15 min, BEGCT needs to be per quarter hour.

2) Quarterly gate closure times combined with hourly marginal pricing could give the BSPs a possibility to manipulate the market. If the BSP can observe that the activation price in the first quarter is large; it will know that that sets a minimum price for the marginal price for the full hour. This could give the BSP an incentive to bid with artificially low prices for the last period of the hour. This behavior would lead to selection of not economically optimal asset on the last quarter hour.

As long as the pricing period for mFRR is on hour the bids should be firm for the whole hour before the start of the hour.

5. **Would it be possible to reduce the bid granularity to the first decimal (e.g. 0.1 MW) after reaching the minimum bid size of 1 MW. For small plants that have 1.7 MW e.g. it would be beneficial as you don't have to aggregate them.**

   The Implementation Framework for mFRR states that the bid granularity is 1MW, and this will be the rule for the MARI platform. We aim to align as close as possible to the European solution and not introduce special Nordic solutions that we will have to change when connecting to MARI. Therefore, the minimum granularity will be 1MW in the Nordic market.

6. **What are the reasons for national differences in the BSP bid time resolution?**

   The differences and reasons behind are elaborated at national meetings.

7. **Is there an interface between AOF/MARI and Cross-Border capacity management tool?**

   The TSO will be responsible for calculating the cross-border capacity for the mFRR energy activation market. Normally the capacity will be equal to the NTC given to the intra-day market minus the allocated capacity from day-ahead and intraday.

   MARI/NORDIC-AOF will receive remaining amount of available capacity from capacity management tool. This is the basis for the capacity calculation. The capacity can be changed by the TSO for system security reasons. All capacity that is not used or reserved for a subsequent process (e.g. aFRR energy activation) in cross-border capacity markets can be used by the mFRR energy activation market.

8. **Why is this such complexity needed for mFRR energy activation market when TSOs are single buyer-seller and needs for up/down regulation is normally not "multi-period equal"?**

The Nordic market and the available bid attributes is based on what is defined in the implementation framework for the European mFRR market. The goal has been to allow for the BSPs to give enough information to make it possible to make a socio-economically efficient bid selection. There is a balance between complexity and efficiency, and we hope that the European project has found such a balance.

9. **If directly activated bids have a longer duration, does it mean that more energy will be used as well?**

   A direct activation is always longer than a scheduled activation since the activation period is always "the rest of the remaining quarter hour and the whole next quarter hour". This means also that more energy will be delivered.

10. **Does the bid volume of technically linked bids have to be equal?**

    The volume of the bids that are technically linked does not have to be the same. However, market participants should be aware of that AOF does not look ahead in time, which means that direct activation of bids in QH0 will continue with unchanged volume into the next quarter of an hour (QH1). For instance, if a bid (e.g. 50 MW) is selected for direct activation in QH0, and this bid is technically linked with a bid in QH1 with lower volume (e.g. 40 MW) , the direct activated bid in QH0 should continue into QH1 with unchanged volume i.e. 50 MW.

11. **How will bids be filtered?**

    Bid filtering will differ between the TSOs. Please refer to the national stakeholder meetings.

12. **What will happen with bids that are multi-hourly in length, thus meaning that parts of it had GCT at time X and other parts of it had GCT at time X+Y hour(s)?**

    The GCT is the latest point at which a bid can be updated. Bids will not cover more than one 15-minute period. There will be a possibility to link bids in time with technical and conditional linking attributes. However, the optimization algorithm does not look ahead only back in time.

13. **Can bids be disregarded due to local/internal zonal congestions?**

    Yes. Bids that can cause a congestion if activated will be filtered out and marked as unavailable.

14. **How will the TSO compensate for lost opportunity if filtering bids due to congestion?**

    The TSO will not compensate for bids that cannot be used because of congestions.

15. **Disregarding bids with no compensation is a huge challenge in portfolio risk management. TSOs are responsible for internal congestions so they should compensate for the consequences.**

    The day-ahead and intra-day markets allow market players to bid their entire portfolio without this risk. The purpose of the balancing market is to solve the balancing problems for the TSO in a market-based way.

16. **Can some bids be activated from some areas but not from other? E.g. an upregulation bid in SE2 can be activated from SE1 and NO3, but not from SE3?**

    The number of bids (amount of energy) that can be exchanged between two areas is restricted by the available transmission capacity. This means that the least expensive bids cannot always be activated.

17. **If there is a need for activation for several periods following each other, will the BSP be asked to deliver the full volume of the bid for consecutive QHs (without in/out ramps) assuming the bid as competitive for all periods?**

    The activation request for the subsequent period will come before the start of the down-ramping of the current period. If a bid is reactivated no change in the output power is needed.

18. **When will a BSP receive a heat-beat activation (an empty activation order)?**

    A heart-beat activation is an "empty" activation order that BSPs that have submitted bids that day shall receive, process and respond to like a real activation order. Heart-beat activation order will be sent only to BSPs for which no bids have been selected for scheduled activation for the upcoming period and to BSPs who have placed bids in any of the next four 15-minute periods.

19. **Activation could be in UP direction in Q1 and DOWN direction in Q2. This means that the BSP (if the bid belongs to same resource) has to ramp more than expected. Is this handled/avoided using bid linking?**

    Yes. If a BSP has this limitation the DOWN bid in Q2 can be conditional and only available if the UP bid in Q1 is NOT activated.

20. **Instead of a heartbeat a solution could be to publish activations in real-time. Then one could easily see if they are in the money and not activated. With additional benefits to the market as well.**

This is not in our plans.

Please refer to the memo on Single price, single position: Single Price Single Position, publication of common Nordic market design document – feedback welcomed – nordicbalancingmodel.

21. **Can it be confirmed that transparency on prices and volumes at the very latest will be given 60 Minutes after the delivery period as required in EU regulations?**

    The TSOs will comply with EU transparency regulations. Prices and volumes will be published shortly after each ISP.

22. **Will there be a new prequalification process for the standard mFRR product in Denmark?**

    There will be no new prequalification process before "Automated operation pre 15 minutes ISP". There will be a need for new prequalification for 15 min ISP period and MARI.

23. **Can you explain the split from hourly to 15-minute bids that FG plans to do?**

    Please refer to the Finnish national stakeholder meeting.

24. **Good to see the preliminary plans per TSO, but it could be good with a common implementation plan given that there would (as minimum) be a common Nordic mFRR mechanism as there has been (but with another name and technical aspects) since about 2002?**

    The overall Nordic implementation plan is the NBM roadmap. The Nordic TSOs have also published an updated "Memo - process for activating products", which describes the major stepwise implementation of different market rules for submitting and activating bids, including product attributes and characteristics.

    Please, find the memo here: An updated version of the memorandum “Product Activation Process” for the mFRR energy activation market – nordicbalancingmodel

25. **How will national bid attributes impact the activations / how are they taken into account by the AOF?**

    National bid attributes will not be forwarded to the AOF. They can be used for bid filtering before the bids are sent to the AOF.

26. **What is included in "TSO AOF verification" function?**

In the period before 15 min ISP - Automated operation - the TSO will have some time to review the result of the AOF before the activation requests are sent to the BSPs. This is to ensure that the results are reliable. Normally no interventions will be done by the TSOs and all bids selected by the AOF will be activated.

27. **What will be the basis for the ISP price that in due time is to be set at min 15 min time resolution (vs. 60 min now)?**

    The volume of scheduled activation that the BSPs will be paid for equals the block energy volume within the 15 minutes period. The volume will be paid for with the mFRR price for that period. There will be an hourly price until 15 min ISP. For direct activation the BSP energy volume is defined as a block volume starting at the midpoint of the ramp.

    The imbalance position of the BRP will be adjusted with the activated volumes. Until 15 min ISP this will be calculated with the block volumes without taking the ramps into account.

28. **How are the internal congestions introduced by the AOF activation handled?**

    Internal congestions that are caused by the AOF activation must be handled by the local TSO. The bid filtering process will try to avoid this as much as possible.