

Evaluation report for go-live of Nordic aFRR Capacity Market

October 2022

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1. Introduction

On 5. August 2020, ACER approved four methodologies for the establishment of a single Nordic Balancing capacity market (CM) for the procurement and exchange of automatic frequency restoration reserves (aFRR CM)¹. This implies, that the Nordic Transmission System Operators (TSOs) have received approval on how cross-zonal capacity for the procurement and exchange of aFRR shall be allocated and which common procurement rules that shall apply. The ACER decision states, that the TSOs shall implement the Nordic aFRR Capacity Market Rules no later than 12 months after the decision has been made.

By procuring balancing capacity, TSOs acquire the option to activate a generation or demand facility to balancing the electricity system in real time. By organizing this common procurement and exchange of balancing capacity, the Nordic TSOs increase competition between providers reducing the overall cost for TSOs. The TSOs estimated (2019) the benefit to be of 53 million euro per annum on Nordic level.

The introduction of a Nordic aFRR CM can, pursuant to EBGL Article 38(5), be implemented, when the cross zonal capacity on all bidding zone borders of the capacity calculation region Nordic (Nordic CCR) is calculated in accordance with the capacity calculation methodology developed pursuant to the capacity allocation and congestion management guidelines (CACM, regulation 2015/1222), i.e. flow-based (FB) capacity calculation methodology (CCM). The national regulatory authorities (NRAs) are legally bound to enforce this requirement.

In October 2020 the NRAs in CCR Nordic, at the request of the Nordic TSOs, provided their guidance on the understanding of the requirement in Article 38(5) in EBGL. The Nordic NRAs write that the FB CCM must deliver appropriate capacity calculation results during the external parallel run in order to fulfil the requirement in Article 38(5). An evaluation report covering at least three consecutive months of external parallel run should therefore be submitted to the NRAs for assessment. The assessment of the evaluation report will be done within one month after receiving it.

Furthermore, in the guidance, the Nordic NRAs write that the specific requirement to submit an evaluation report to the Nordic NRAs also follow from the Nordic CCR NRA's agreement to amend the TSOs' CCM proposal of 17. April 2020. This evaluation report aims at providing the Nordic NRAs with a basis for assessing the functioning of the FB CCM during the implementation phase. In that respect, the TSO's evaluation report could serve two different purposes, by also serving as a basis for demonstrating that the condition pursuant to Article 38(5) in EBGL is fulfilled. The guidance indicates that the evaluation of the functioning of the FB vis-à-vis

¹ ACER decisions no. 19-22/2020.

the introduction of aFRR CM in the Nordic can be separated from the assessment of whether the FB is sufficiently well-working to go-live.

The external parallel run was launched early March 2022. An evaluation of the external parallel run based on specific assessment criteria (KPIs) has been made.

The report therefore constitutes the basis for a NRAs assessment of whether FB is sufficiently well performing to calculate capacities in order for the TSOs to implement the Nordic aFRR CM.

2. Result of the evaluation

The TSOs have assessed the evaluation results of the external parallel run with respect to the legal requirements in EBGL, ACER decisions no. 19/20/21/22-2020 of 5. August 2020 and with respect to the guidance provided by the NRAs of 14. October 2020.

The TSOs have fulfilled following legal requirements:

- A Nordic common grid model has been established,
- Data covering three consecutive months of external parallel run have been produced by the TSOs and Nordic RCC (NRCC), and
- An evaluation report with data covering three consecutive months have been produced (the present).

The use of fallback measures (as described in Article 22 of the capacity calculation methodology) is the relevant criteria (KPI) in the assessment of whether the FB capacity calculation is sufficiently well performing.

The Nordic TSOs have assessed the results of the parallel run of FB covering 5. June 2022 to 4. September 2022 in section 3.3. The data from the parallel run show that the use of fallback measures is less than 3 % for the 3 consecutive months. The Nordic TSOs thus find that the requirement set out by the Nordic CCR NRAs is fulfilled and that the Nordic aFRR CM can be implemented in December 2022.

The TSOs assessment is made with reference to the following legal consideration, hereunder the guidance provided by the NRAs 14 October 2020. For an in-depth overview of the proceedings and the legal framework, please refer to the appendices attached.

Overall, the TSO find that the parallel run has delivered appropriate capacity calculation results, i.e. that the capacity calculation has been sufficiently well performing to be compliant with Article 38(5) in EBGL.

3. Criteria assessment

The criteria (KPI) assessment presented in this chapter is based on 3 consecutive months of parallel run of flow-based (FB) covering 5. June 2022 to 4. September 2022².

The criteria (KPIs) used for assessing the functionality of the CCM, as set out in the agreement of 14. October 2020 by the Nordic CCR NRAs on the implementation of a final checkpoint for go-live of the FB CCM, are:

- *Criteria 1 – Use of fallback measures*
- *Criteria 2 – Structural delays*
- *Criteria 3 – Socioeconomic welfare*
- *Criteria 4 – Effects on intraday market*
- *Criteria 5 – Stakeholder feedback*

In this section the relevance of each individual criteria for the Nordic aFRR CM will be reviewed.

Criteria 1, fallback measures (as described in Article 22 of the capacity calculation methodology), is the only relevant criteria in the assessment of whether FB is sufficiently well performing to calculate capacities, i.e. the relevant requirement in EBGL 38(5).

For Criteria 1, fallback measures, the TSOs will demonstrate that the TSOs and Nordic RCC (NRCC) are able to provide results of the FB capacity calculation daily.

Regarding Criteria 2, 3 and 4, the TSOs do not find them relevant in order to assess whether FB is sufficiently well performing to calculate capacities since any adjustment on the input to calculation will have no affect the TSOs' process and performance with respect to the calculation.

Moreover, it will not be possible to compare the socioeconomic welfare of the current NTC methodology to the estimated results from using the new methodology at the current stage, due to the unavailability of the NEMO-owned '*Simulation Facility*' (SF) tool³. Awaiting the availability of Simulation Facility tool would result in an unnecessary delay of the implementation of the Nordic aFRR CM.

Regarding criteria 5, stakeholder feedback, the Nordic TSOs believe that this evaluation report does not need to be consulted with stakeholders in order to gather their reflections on the FB functioning and mainly the FB market results. This evaluation report is drafted only for the Nordic CCR

² At the time of formalizing this report, EPR has been extended/re-started due to the unavailability of the Simulation Facility tool. However, the three months of EPR covered in this report provide the necessary data for showing the fulfilment of KPIs relevant for Nordic the aFRR Capacity Market.

³ The NEMO-owned '*Simulation Facility*' tool has been down since 12. June 2022.

NRAs and focus only on whether FB is performing sufficiently well to calculate capacities in order to be able to implement the Nordic aFRR CM.

Due to the request from the Nordic CCR NRAs, the evaluation report for go-live of Nordic aFRR Capacity Market will, however, be available for a public hearing. Relevant input from stakeholders will be taken into account before the submission of the evaluation report to the Nordic NRAs.

Thus, Criteria 1, is the only criteria considered essential for this evaluation report.

Criteria 2, 3, 4 and 5 are included as a part of the evaluation report as well, as a general assessment on the functionality and the efficiency of the capacity calculation methodology. They are, however, not relevant in the assessment of whether FB is sufficiently well performing to calculate capacities.

3.1 Status on external parallel run

During External Parallel Run (EPR), the FB capacity calculation is performed by the TSOs and NRCC, alongside the TSO's operational capacity calculation. Where the operational capacity values are used in the day-ahead Market Coupling, the FB parameters are used in a Flow-Based Market Coupling simulation, by using the order books submitted in the Market Coupling. These latter simulations are performed in the Simulation Facility (SF), where the order books are available to be used in simulations after a two-weeks grace period. As such, not only the outcome of the capacity calculation processes can be compared, but also the resulting / simulated market outcome.

The EPR is jointly performed by TSOs, NRCC, and the NEMOs. The TSOs and NRCC operate the capacity calculation process, as described in the CACM and the Nordic DA and ID CCM, whereas the NEMOs perform the FB simulations in the SF.

The market coupling mechanisms (i.e. the DA allocation mechanism), needs a simplified description of the grid in order to optimize the pan-European DA market welfare, by setting the net positions (import/export) and market prices, while respecting the TSO grid constraints. The FB methodology is the better, and more detailed, methodology to describe simplified grid constraints. In FB a capacity split (i.e. what amount of capacity on which border) is not a choice of the TSO, but is market driven (at the time of day-ahead allocation). This should lead to a more efficient and flexible use of the grid, when compared to the NTC methodology:

- FB offers more trading opportunities with the same level of operational security
- More price convergence / smaller price differences
- Higher social welfare

- Income redistribution: Less congestion income and more producer and consumer surplus

This theoretical claim is hard to demonstrate though, as

- The “same level of operational security” is hard to quantify
- The DA market allocation optimizes the pan-EU welfare, so the change from NTC to FB will affect the pan-European welfare and the distribution of it.

Nevertheless, welfare comparisons between the simulated FB and simulated NTC market coupling results can be made. The latter is needed in order to get access to the relevant socio-economic indicators (such as producer and consumer surplus), which are not available from the operational NTC market coupling. Both these simulations, FB and NTC market coupling, require the use of the SF tool. The version 3 of the tool is to be replaced by the new version 4. This migration started on 12. June, and did not end at the time of writing this report. This brings us to a situation where hardly any market simulations could be performed since the start of the EPR.

The EPR started on 7. March 2022. The NRAs have been informed on the EPR status during regular meetings with the Regulatory WG in the CCM project⁴.

3.2 Ability to calculate FB capacity daily

In the following section, the Nordic TSOs will demonstrate that:

- The TSOs and NRCC can provide results of the FB capacity calculation on a daily basis.
- That the capacity calculation process has stabilized over the past months.

The demonstration of results hence shows that the TSOs fulfil the requirements set out in Article 38(5), and that a Nordic aFRR CM can be implemented. Thus, the TSOs and NRCC are able to provide results of the FB capacity calculation on a daily basis.

The FB capacity calculation is the process where the relevant FB parameters are computed by the coordinated capacity calculator (CCC). In this calculation, the common grid model is the starting point, providing an estimate grid topology and working point for the day of operation. From this starting point, the effects of having imports and exports on the loading of the critical network element monitored under a contingency (CNEC) are assessed and captured in the power transfer distribution factors (PTDFs). By computationally removing the imports and exports present in the

⁴ Nowadays: monthly re-occurring meetings.

common grid model (CGM), from the loading of the CNECs, the amount of MWs available on the CNECs for the market are evaluated (i.e. the remaining available margin (RAM)). Both the PTDFs and the RAMs constitute the FB parameters.

The EPR started on March 7, and the performance of the capacity calculation process is summarized in the two bar charts below.

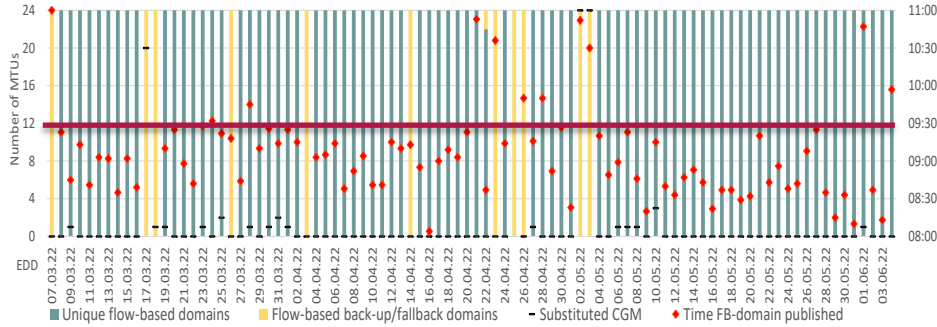


Figure 1 EPR performance in the first three months of EPR

The red bar describes the timing set in TSO/NEMO procedures to provide cross-zonal capacities to NEMOs for allocation purposes.

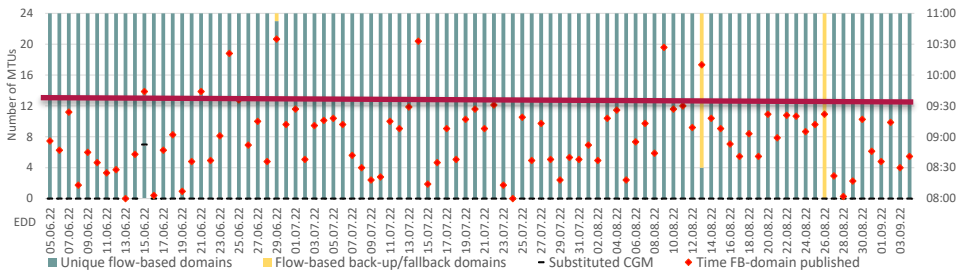


Figure 2 EPR performance in the second three months of EPR

The red bar describes the timing set in TSO/NEMO procedures to provide cross-zonal capacities to NEMOs for allocation purposes.

The charts focus on the fallbacks that have been applied in the capacity calculation process⁵, the CGMs substituted⁶, and the time that the domain was available to be shared with the allocation mechanism⁷.

When comparing the two charts the performance in the last three months of EPR have significantly improved compared to the first three months due to less days where fallbacks had to be applied, and less days where CGM substitution was required.

3.3 Assessment of the use of fallback measures

As described in Section 3 Criteria 1 – Use of fallback measures is the relevant criteria in the assessment of whether FB is sufficiently well performing to calculate capacities, i.e. the relevant requirement in EBGL

⁵ Art 22 from the CCM, the yellow bars

⁶ CGM-related fallback measures

⁷ Red diamonds

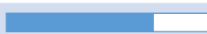
Article 38(5). The criteria is described in Article 22 of the capacity calculation methodology.

By assessing the use of fallback measures, the TSOs demonstrates that the TSOs and Nordic RCC (NRCC) are able to provide results of the FB capacity calculation daily.

The KPI for the use of fallback measures is described by the Nordic CCR NRAs as:

- Fallback measures (as described in Article 22 of the methodology⁸) should be used in less than 3 % of market time unit (MTU) covered in the report to consider the methodology to operate sufficiently well concerning this criterion.
- NRAs shall assess the reasons for TSOs use of fallback measures based on the analysis and explanations received from the TSOs.

The amount of fallbacks in the last three months reached 2.0 %, which is well below the 3 % boundary value.

NRA KPI	Realized (boundary value)	Status
Use of fallback measures (Art 22, CCM)	2,0% (3%)	0  3%

Reasons why fallback measures had to be applied:

- 29/06 (1 MTU): One TSO provided a too high individual validation adjustment (IVA) and recalculation resulted in one backup MTU.
- 13/08 (20 MTUs): NorCap ran out of disk space.
- 26/08 (24 MTUs): Input file was missing for one TSO.

The fulfilment of this KPI demonstrates that with the input data provided by the TSOs, the TSOs and NRCC can perform the FB capacity calculation process.

The demonstration of results hence shows that the Nordic TSOs fulfil the requirements set out in EBGL Article 38(5), and consequently the Nordic aFRR CM can be implemented.

3.4 Assessment of additional criteria

As described in Section 3 the TSOs do not find Criteria 2, 3, 4 and 5 relevant in order to assess whether FB is sufficiently well performing to calculate

⁸ Article 22: Fallback procedure if the initial capacity calculation does not lead to any results

1. When day-ahead or intraday capacity calculation fails to provide the FB parameters for two or less consecutive market time units, the CCC shall calculate the missing FB parameters as being the minimum of the FB parameters, which have been successfully calculated for adjoining market time units.

2. When day-ahead or intraday capacity calculation fails to provide the FB parameters for three or more consecutive hours, the CCC shall apply the default FB parameters. These default FB parameters shall be based on latest calculated FB parameters for the same market time unit and market time frame taken from daily, weekly, monthly or yearly capacity calculation.

capacities since any adjustment on the input to calculation will have no affect the TSOs' process and performance with respect to the calculation.

However, since the criteria are included as a part of the general assessment on the functionality and the efficiency of the capacity calculation methodology, they are evaluated briefly in the sections below. They are, however, not relevant in the assessment of whether FB is sufficiently well performing to calculate capacities.

3.4.1 Criteria 2 – Structural delays

- The delivery of FB parameters by the CCC to the ENTSO-E transparency platform in accordance with Transparency Regulation is delayed for 2-10 minutes in less than 5 % of the MTUs in the time period covered in the TSOs' report. Any delay exceeding 10 minutes is not acceptable.
- The publication of FB parameters to stakeholders is delayed for 2-10 minutes in less than 5 % of the MTUs in the time period covered in the TSOs' report. Any delay exceeding 10 minutes is not acceptable.

The process timings are monitored by looking at the time that the FB parameters are available to be shared with the allocation mechanism (9.30), and the time that the FB parameters are published on the JAO platform (11.00).

The deadline for the FB parameters to be shared with the allocation mechanism (9.30) has been exceeded on 9 days.

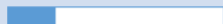

- 2 days were within the 10-minute delay, defined and allowed for by the NRAs.
- 7 days were exceeding the 10-minutes delay, and violating the NRAs' KPI.
 - The NRCC and TSOs will consider the time in between 9.30 and 10.00 as the normal process (as is the case in the operational capacity calculation process, see also below): this covers two days.
 - The remaining 5 days are exceeding the 10.00 deadline as well.

The 11.00 deadline for the publication on the JAO platform/stakeholders has been delayed on 5 days:

- 1 day, was within the 10 minutes delay, defined and allowed for by the NRAs.
- 4 days were exceeding the 10-minutes delay and violating the NRAs' KPI.

Although the late publication should be prevented (and will be with an automatic procedure in place), it does not negatively impact the implementation of the Nordic aFRR CM. When the aFRR CM is implemented, the capacity calculations will be based on NTC values at first. Therefore, a late publication of FB results in external parallel run will not impact the capacities related to the aFRR CM. When FB goes live, the capacity calculations for aFRR CM will be based on FB(ATCE).

In addition, the aFRR CM market is cleared before the day-ahead market. Hence, when FB goes live, the capacities used for allocating cross-zonal capacity to the aFRR CM will be based on the FB capacities calculated for D-1. Also, the gate closure time for the aFRR CM is at 7.30 in order to respect the deadline for publishing cross-zonal capacities to the market participants and sending cross-zonal capacities to NOIS and NorCap. Hence, a late publication of FB parameters does not affect the calculation of cross-zonal capacities for the aFRR CM.

NRA KPI	Realized (boundary value)	Status
Structural delay delivering FBp to the allocation (9.30) <ul style="list-style-type: none"> Delayed 2-10 minutes Delayed > 10 min 	<ul style="list-style-type: none"> 1,1% (5%) 7 days (0) 	0  5% X
Structural delay availability FBp for stakeholders (11.00) <ul style="list-style-type: none"> Delayed 2-10 minutes Delayed > 10 min 	<ul style="list-style-type: none"> 1,1% (5%) 4 days (0) 	0  5% X

Reasons why the 9.30 deadline has been violated:

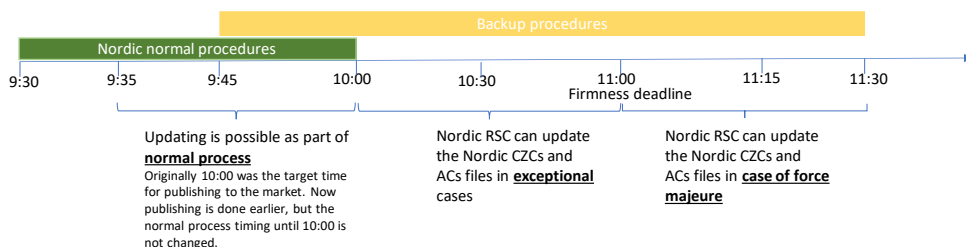
- 15-6-2022: The domain was first published at 8.20 and back up MTUs were included in it. New files were provided by a TSO leading to results on every MTU. All TSOs validated domain again and a second version was published at 9.44.
- 21-6-2022: One TSO was a bit delayed in the final domain validation.
- 24-6-2022: Some issues with new file formats. The first domain was published with 24 back-up MTUs at 09.03. New IGM files fixed the issue, and a valid domain was published without a TSOs' individual validation adjustment (IVA) at 09.41 and with a TSOs' IVAs at 10.21.
- 25-6-2022: A TSOs' operator password expired.
- 29-6-2022: A spanning domain for MTU 14 has been applied. During the morning validation a TSO mistakenly provided a too large IVA for one MTU, resulting in a failed calculation. After that the UI did not allow to trigger a re-calculation.

- 14-7-2022: A network issue blocked TSOs from performing domain validation during the morning and previous evening. Access was restored shortly after 10.00 and the domain was validated and published.
- 9-8-2022: One TSO was unable to access the system; the access problem was shared with the NRCC at 09.20. Another TSO validated the domain on behalf of the TSO with access issues. The domain was published at 10.27.
- 13-8-2022: NorCap ran out of disk space. This led that a domain with 4 normal MTUs (1,2,3,5), 2 spanning MTUs (0, 4), and 18 back-up MTUs. This domain was published at 10.10 but contained no IVA due to the limited IT resources. TSOs added IVAs and the recalculated domain was published at 11.08 (with same amount of back-up and spanning MTUs).

The main reason why the 11.00 deadline has been violated, is that the manual sending (back-offices task) has been performed too late. An automatic sending has been implemented in the beginning of July but failed from around 22. July onwards; the automatic functionality is working again in the meantime.

The TSOs has become aware that the operational process under FB is not yet aligned to the current operational process (under NTC). Indeed, in the NTC operational process, in case no capacity can be shared with the NEMOs at 9.30, zero capacities will be released, with the possibility to have those capacities updated later on the timeline.

A similar process chain is now being developed for the FB capacity calculation process. In other words, when the NRCC is not able to perform or complete the FB capacity calculation process, e.g. in the case that the capacity calculation system is down, a fallback domain will be published at 9.30 at the latest. In this case, being an exceptional case, the Nordic RCC can provide a capacity update until 11.00. The period between 9.30 and 10.00 is considered to be part of the “normal procedure”.



3.4.2 Criteria 3 – Socioeconomic welfare

The FB methodology is the better, and more detailed, methodology to describe the simplified grid constraints used in the allocation mechanism. Indeed, in FB a capacity split (i.e. what amount of capacity on which border) is not a choice of the TSO, but is market driven (at the time of

allocation). This should lead to a more efficient and flexible use of the grid, and thereby a higher socio-economic welfare, when compared to the NTC methodology. This theoretical claim / expectation could not be proven yet, due to the absence of market simulation results.

The TSOs are waiting for the SF to be available for the market simulations, so that a timely and regular feedback loop to the operators and the input data can be put in place, to be able to demonstrate a positive socioeconomic welfare difference between FB and NTC.

The market simulations in SF will not change the TSOs and NRCC ability to provide results of the FB capacity calculation on a daily basis, hence fulfilment of criteria 1.

Although at the current stage, due to the non-availability of the SF, the TSOs are not able to provide quantitative assessments of the socio-economic welfare, this does not change the observation that the capacity calculation engine works – from input data to the FB parameters resulting. Indeed, the socio-economic welfare analysis may highlight room for improvement in terms of input data, or tuning of the engine, yet this does not affect the FB performing sufficiently well to calculate capacities.

3.4.3 Criteria 4 – Effect on intraday market

To assess the effect on the intraday market, the TSOs are asked to compare the operational (“NTC-world”) and “FB-world” intraday (ID) gate opening capacities. The way to make this comparison has been aligned with the NRAs. The “FB-world” ID gate opening capacity can only be determined after the FB market coupling has been simulated. Indeed, it is the DA left-over capacity that is provided to the ID market at gate opening.

In the absence of market simulation (SF) results, the TSOs do not have an evaluation for the effect on the ID market.

3.4.4 Criteria 5 – Stakeholder feedback

The TSOs do not find, that the evaluation report, that constitutes the basis for an NRAs assessment of whether FB is sufficiently well performing to DA calculate capacities before the Nordic aFRR CM is allowed to go-live, needs to include stakeholder feedback. Hence, Criteria 5 does not need to be evaluated for this evaluation report.

The present report is not the "three-months" report that the TSOs need to consult with stakeholders in order to gather their reflections on the FB functioning and mainly the FB market results, i.e. side-letter of 14. October 2020.

This report does not serve the purpose on how the cross-zonal capacity will be allocated, but on whether the FB is sufficiently well performing to calculate capacities in order for the Nordic aFRR CM to go live. The TSOs acknowledge the points made by the NRAs in the side-letter, regarding go-

live of FB, i.e. “that this new flowbased methodology will involve significant change in the way the electricity markets work in the Nordics” and that “...stakeholders need to be provided with sufficient opportunity to understand the transition as well as transparency in the introduction of it to establish trust in the functioning of the methodology...” Following this, the TSOs would like to assure the NRAs that they will receive an FB go-live evaluation report that meet the criteria indicated in the side-letter and that the TSOs will carry out a stakeholder consultation and address consultations comments in accordance with the intention of the side-letter.

The focus in the present evaluation report is however on the aFRR CM go-live and whether FB is performing sufficiently well to calculate capacities, and in total, it is not a question whether the aFRR CM should be taken into use, only a question of *when* it will be taken into use.

The stakeholders have already been involved when the methodologies for the aFRR capacity market was drafted. Therefore, they have been consulted on the issues regarding how the cross-zonal capacity will be allocated, i.e. on the process to define the maximum volume of allocated cross-zonal capacity for the exchange of balancing capacity.

Even though the TSOs do not find, that stakeholder feedback should be included in the present evaluation report, a public hearing will take place due to the specific request from the Nordic NRAs.

Appendix 1 – Proceedings

The proceedings of relevance to the assessment of compliance with EBGL GL 38(5) are described in this section

2009 **Electricity regulation No 2009/714, “3. energy liberalization package”**

2015 **CACM, Capacity allocation and congestion management, regulation No 2015/1222**

2017 **EBGL, guideline on electricity balancing, regulation No 2017/2195**

Article 41(1) of the EB Regulation allows TSOs to submit a proposal for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity or sharing of reserves methodology by two years after the entry into force of the EB Regulation.

As the EB Regulation entered into force on 18 December 2017, the deadline to submit a proposal under Article 41(1) of the EB Regulation was 18 December 2019.

2018 **TSOs’ public consultation of proposal**

TSOs published for public consultation the draft proposal for a methodology for a market-based allocation process of cross-zonal capacity for the exchange of aFRR balancing capacity in accordance with Article 38(1) of EBGL.

The consultation lasted from 3 September 2018 to 4 October 2018.

2019 **TSOs’ submission of proposal to CCR Nordic NRAs**

15 April 2019 the TSOs submitted to the regulatory authorities in CCR Nordic a proposal in accordance with Article 33(1) and Article 38(1)(b) of the EB Regulation. The last regulatory authority received the Proposal on 17 April 2019.

NVE-RME was participating in discussions with the CCR Nordic NRAs on an informal basis pending the implementation of EU’s third energy package (implemented in Norwegian law as of 1. November 2019), but with the EBGL implementation into Norwegian law still pending.

2019 **CCR Nordic NRAs’ request for amendment to the proposal**

All regulatory authorities of the Nordic CCR jointly requested an amendment to the proposals and sent this request to the TSOs. The last regulatory authority issued the request for amendment nationally on 17 October 2019.

2019 TSOs' resubmission of the proposal to the CCR Nordic NRAs

17 December 2019 the TSOs resubmitted the amended proposal 5 to their regulatory authorities and the last regulatory authority received the amended Proposal on 17 December 2019 (hereafter referred to as the 'Proposal'). Therefore, the new deadline for approval by all regulatory authorities was 17 February 2020.

2020 Referral to ACER by NRAs in CCR Nordic

In a letter dated 28 February 2020, the Finnish Energy Authority, on behalf of the regulatory authorities, informed ACER that the CCR Nordic NRAs were not able to reach an agreement within the two-month deadline and requested ACER to adopt a decision on the Proposal pursuant to Article 6(10) of Regulation 2019/942.

2020 ACER consultation with TSOs and NRAs on the proposal

On 24 March 2020, ACER started the consultation phase on the Proposal, inviting the concerned parties, here TSOs and regulatory authorities of the Nordic CCR, to send their comments on the Proposal. ACER cooperated closely with the regulatory authorities and TSOs.

2020 ACER decisions no. 19-21/2020 of 5 August 2020 on the Nordic aFRR Capacity Markets

ACER decision 22-2020 establishes a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity.

ACER decision 21-2020 establishes a methodology for the application of an allocation process of cross-zonal capacity for the exchange of balancing capacity. This decision defines the pre-conditions when TSOs are allowed to start exchanging balancing capacity which – most notably - is that cross-zonal capacity needs to be calculated pursuant the approved Nordic CCM methodology for the DA timeframe.

ACER Decision 20-2020 decides on the exemption to TSOs for not allowing balancing service providers to transfer their obligations to provided balancing capacity.

ACER decision 19-2020 sets out harmonised rules for the procurement and exchange of balancing capacity

2020 **CCR Nordic NRAs' position paper on TSOs' CCM proposal on flow-based (14 October)**

Side-letter - Agreement by NRAs of CCR Nordic on the implementation of a final checkpoint for go-live of CCR Nordic FB CCM (14 October)

The NRAs of CCR Nordic have on 14 October 2020 reached an agreement that the TSOs' CCM Proposal meets the overall requirements of Regulation 2015/1222, i.e. CACM.

The agreement contains a number of amendments that were approved nationally together with the capacity calculation methodology. Together the amendments constitute a final checkpoint for go-live of the flow-based CCM.

2020 **Nordic CCR NRA guidance on aFRR go-live (14 October 2020)**

At the NRA/TSO NBM Coordination Group meeting on 26 August 2020 the TSOs asked for guidance on the implications of Article 38(5) of the EBGL in light of ACER's decisions.

The Nordic CCR NRAs provided guidance in the form of a letter dated 14 October 2020.

2021 **Go-live of National aFRR CM in Norway (November 2021)**

2022 **Go-live of National aFRR CM in Finland (January 2022)**

2022 **Launch of the external parallel run by the RCC (March 2022)**

The external parallel run started on 7 March 2022 for the delivery day of 8 March 2022.

The results from the first market simulations are available on the Nordic RCC website.

2022 **Go-live of National aFRR CM in Sweden (May 2022)**

2022 **CCR Nordic NRA and TSO dialogue on aFRR CM go-live**

2022

Notification on the use of market-based allocation of cross zonal capacity for the common Nordic aFRR capacity Market (8. September 2022)

Notification on ENTSO-E's homepage regarding that the TSOs of the Nordic CCR; Fingrid, Statnett, Svenska kraftnät and Energinet, expect to take the common Nordic market-based allocation process of cross-zonal capacity for the exchange of aFRR balancing capacity into use 8. December 2022. The exact implementation date is depended on final approval from the Nordic NRAs and will be announced on [nordicbalancingmodel](https://www.entsoe.eu/nordicbalancingmodel) and on local TSOs websites when approved.

Appendix 2 – Legal framework

Electricity Balancing (EBGL) regulation (EU) 2017/2195

The electricity balancing regulation (Regulation 2017/2195 as amended by Regulation 2021/280) stems from the electricity regulation (2009/714), which has been repealed by regulation 2019/943, i.e. the recast electricity regulation.

Pursuant to Article 3(1) and 3(2), the main objectives of the electricity balancing guideline (EBGL, regulation 2017/2195) are to foster effective competition, non-discrimination and transparency in balancing markets; enhancing efficiency of balancing and integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security.

Article 3 Objectives and regulatory aspects

1. This Regulation aims at:

- (a) fostering effective competition, non-discrimination and transparency in balancing markets;*
- (b) enhancing efficiency of balancing as well as efficiency of European and national balancing markets;*
- (c) integrating balancing markets and promoting the possibilities for exchanges of balancing services while contributing to operational security;*
- (d) 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;*
- (e) 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;*
- (f) 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;*
- (g) facilitating the participation of renewable energy sources and support the achievement of the European Union target for the penetration of renewable generation.*

2. When applying this Regulation, Member States, relevant regulatory authorities, and system operators shall:

(a) apply the principles of proportionality and non-discrimination;

(...)

Title IV in the EBGL is about Cross-zonal capacity for balancing energy. Chapter 2 concerns Exchange of balancing capacity or sharing of reserves. Article 38 concerns general requirement.

Pursuant to Article 38(1) in EBGL, the TSOs can set up a proposal for the application of one of three processes.

The Nordic TSO have chosen the Market-based allocation process pursuant to Article 41.

Article 38. Concerns general requirements

1. Two or more TSOs may at their initiative or at the request of their relevant regulatory authorities in accordance with Article 37 of Directive 2009/72/EC set up a proposal for the application of one of the following processes:

- *co-optimised allocation process pursuant to Article 40;*
- *market-based allocation process pursuant to Article 41;*
- *allocation process based on economic efficiency analysis pursuant to Article 42.*

Pursuant to Article 38(5) in EBGL, the TSOs may allocate cross-zonal capacity only if cross-zonal capacity is calculated in accordance with the capacity calculation methodologies developed pursuant to Regulation (EU) 2015/1222 and (EU) 2016/1719, i.e. CACM GL and FCA.

5. TSOs may allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves only if cross-zonal capacity is calculated in accordance with the capacity calculation methodologies developed pursuant to Regulation (EU) 2015/1222 and (EU) 2016/1719.

Nordic CCR NRAs referral letter of Nordic TSOs' balancing proposal to ACER, February 2020

28. February 2020⁹ the Nordic CCR NRAs referred the TSOs' balancing proposal to ACER¹⁰ as none of the revised proposals were found approvable by all of the CCR Nordic Regulatory Authorities. An unanimous approval within the deadlines in the EBGL is a prerequisite for approval at regional level. The referral letter to ACER was accompanied with an explanatory document (annex I) explaining why the proposals were not found approvable by the NRAs.

It is indicated in this document that the Norwegian Energy Regulatory Authority participated in discussions with the CCR Nordic NRAs on an informal basis pending the implementation of EBGL in Norway.

In the explanatory document the NRAs lay out their view on Article 38(5) in EBGL under the heading "Lack of compliance with EBGL Article 38(5)":

Lack of compliance with EB GL article 38(5)

Article 10(2) in the revised proposal pursuant to EB GL arts. 33(1) and 38(1) allows the Nordic TSOs to allocate cross zonal capacity for the exchange of balancing capacity by applying the Net Transfer Capacity method until the go live of Flow Based. The CCR Nordic NRAs find that the proposal thereby does not comply with the constraints following from EB GL art 38(5) according to which there can be capacity reservations only if cross zonal capacity is calculated in accordance with the with the capacity calculation methodologies developed pursuant to Regulation (EU) 2015/1222 and Regulation (EU) 2016/1719.

The CCR Nordic NRAs find that a solution could had been to revise the proposals to take this into consideration in the implementation plan for the market.

Ei, DUR and NVE-RME notes that a strict reading of EB GL art. 38(5) links reservation of capacity for balancing purposes to the implementation of capacity calculation methodology according to CACM and FCA (flow-based for CCR Nordic). However, Ei, DUR and NVE-RME see no immediate and reasonable link between the proposed allocation process and the flow-based capacity calculation method. A strict reading potentially results in a delay of

⁹ ANNEX 1 CCR Nordic Regulatory Authorities statement of disagreement on the Nordic TSO's proposal on a Nordic capacity market for frequency restoration reserves with automatic activation submitted pursuant to Commission Regulation (EU) 2017/2195 (EB GL)). Annex1_Non-paper_AFRR_.pdf (nordicenergyregulators.org)

¹⁰ All TSOs' of CCR Nordic proposal for a methodology for a market-based allocation process of cross-zonal capacity for the exchange of balancing capacity in accordance with Article 41(1) of the Commission Regulation (EU) 2017/2195 of 23 November 2017 establishing a guideline on electricity balancing. 1) Legal Proposal and explanatory document to Article 41 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. 2) Legal Proposal and explanatory document to Article 33 and 38, 3) Legal Proposal and explanatory document to Article 34

several years before a Nordic aFRR capacity market can be implemented, thus postponing the realization of socioeconomic benefits for the region. Ei, DUR and NVE-RME thus urge ACER to consider whether a strict reading of Art 38(5) aids the overall purpose of the EBGL which i.a. is to integrate balancing markets and enable exchange of balancing reserves.

Secondarily, Ei, DUR and NVE-RME would like ACER to assess whether it could be legally possible to accept an interim period where the capacity is calculated with the capacity calculation methodologies applied in the CCR Nordic today.

EV finds the wording and intention of EB GL art. 38(5) clear and thus, it does not provide room for different interpretations. The intention is to restrict reservation of capacity until the capacities are calculated in a transparent manner with an approved methodology. EV considers EU Regulations, such as EB GL, binding in its entirety regardless of views or opinions around its convenience.

ACER decisions no. 19-22/2022 on the Nordic TSOs' balancing proposals

On 5 August 2020, ACER adopted four decisions approving methodologies for the establishment of a Nordic balancing capacity market for frequency restoration reserves with automatic activation (aFRR), i.e. decisions no. 19-22/2020.

The decisions create a single Nordic Balancing capacity market for the procurement and exchange of automatic frequency restoration reserves.

ACER decision 21-2020 defines the pre-conditions when TSOs are allowed to start exchanging balancing capacity which - most notably - is that cross-zonal capacity needs to be calculated pursuant the approved Nordic CCM methodology for the DA timeframe, i.e. Article 38(5) in the EBGL.

Article 5 Publication and implementation of the Nordic Market-based Application Methodology, litra 2 in Annex I to the decision, which constitutes the approved methodology, reads:

Article 5(2) The TSOs shall implement this methodology no later than 12 months after a decision has been made by the European Union Agency for the Cooperation of Energy Regulators in accordance with Article 6(2) of the EB Regulation but only when the cross zonal capacity on all bidding zone borders of the Nordic CCR is calculated in accordance with the capacity calculation methodologies developed pursuant to the CACM Regulation.

Decision no. 21-2020 provides further background to the approved methodology i.e. annex I. (18) and (19) in the decision regard the initial observations of the regulatory authorities:

(18) The letter of the Finnish Energy Authority dated 28 February 2020 states that the regulatory authorities closely cooperated among each other to agree on approving the Nordic aFRR Balancing Capacity Market proposals, which includes the Proposal pursuant to Article 33(1) and 38(1)(b) of the EB Regulation, and that however, after extensive discussion, it became evident that the regulatory authorities were not able to reach an agreement within the deadline of two months.

(19) Regulatory authorities could not agree on one main aspect of the Proposal pursuant to Article 33(1) and 38(1)(b) of the EB Regulation, namely on the proposed way to accept a legally compliant interim solution with regard to Article 38(5) of the EB Regulation.

Recital 31 concerns the requirement with regards to Article 38(5) in EBGL.

(31) Article 38(5) of the EB Regulation requires that TSOs may only allocate cross-zonal capacity for the exchange of balancing capacity or sharing of reserves if cross-zonal capacity is calculated in accordance with the capacity calculation methodologies developed pursuant to Regulations (EU) 2015/1222 and (EU) 2016/1719.

Recital 40 establishes that the proposal does not include a conditionality to the implementation of aFRR CM to the requirement in Article 38(5) in EBGL.

(40) Article 15 of the Proposal lays down the implementation timeline for the methodology for the application of the market-based allocation methodology. The TSOs proposed an implementation timeline of twelve months after the approval by the relevant regulatory authorities. The Proposal does not include a conditionality of implementing this methodology linked to the requirement of Article 38(5) of the EB Regulation. Hence, the Proposal does not fully fulfil the requirements of Article 5(5) of the EB Regulation with regard to the proposed timescale for implementation of the methodology for the application of an allocation process for cross zonal capacity. ACER deemed it necessary to amend paragraph (2) under Article 15 of the Proposal allowing the application of the market based allocation only when cross-zonal capacity is calculated pursuant to the CACM and FCA Regulations.

Recital (46)-(48) describe the input provided by the TSOs and the Swedish and Danish NRAs and ACER's assessment of these, i.e. that the TSOs note that delay of Nordic aFRR CM will come at a great socio-economic cost to the Nordic societies and that Danish and Swedish NRA do not support a strict reading of EBGL 38(5) with reference to the objectives of the EBGL.

(46) In the feedback referred to in Recital (27), the TSOs expressed their concerns with the possible outcome of the current draft methodologies and ACER decisions, as, in the TSOs view, these decisions would result in a situation where the establishment of the regional aFRR balancing capacity market is delayed. TSOs consider that the reason for such delay is that the legal interpretation of the EB Regulation that results in implementing the aFRR capacity market only when cross-zonal capacity is calculated with the flow-based capacity calculation methodology. TSOs further state that delaying the implementation of a common Nordic aFRR capacity market due to the interpretation of the EB Regulation will cause a socio-economic loss for the Nordic society of approximately 50 million euros per year.

(47) In the feedback referred to in Recital (27) the Swedish regulatory authority repeated the message referred to in recital (18) that they see no immediate and reasonable link between the proposed allocation process and the flow-based capacity calculation method and that they encourage ACER to consider whether a strict reading of Article 38(5) of the EB Regulation supports the objectives of the EB Regulation which i.e. aim to integrate balancing markets and enable exchange of balancing reserves and to assess whether it could be legally possible to accept an interim period where the capacity is calculated with the capacity calculation methodologies applied in the CCR Nordic today.

(48) In the feedback referred to in Recital (28) the Danish regulatory authority referred to the message referred to in recital (18) on the limitations posed by Article 38(5) of the EB Regulation and as such, they still see unfortunate consequences of a strict reading of this article. Further, this regulatory authority highlights that references to the requirements of Article 38(5) of the EB Regulation should be rather in the recitals than in the articles and sees no need to specify in the articles on implementation of the methodology how Article 38(5) of the EB Regulation is to be applied by the TSOs.

Recital (49) contains ACER's conclusions based on the input in recital (46)-(48). ACER clarifies in the approved methodology (annex I) that the day-ahead capacity calculation methodology is the one relevant for this

methodology. Otherwise the ACER decision no. 21-2020 does not offer an interpretation, which goes beyond wording of Article 38(5) in EBGL The ACER decision does on the other hand not exclude the implementation of aFRR CM before flows are allocated according to the CCM FB, i.e. go live of CCM FB in CCR Nordic.

(49) Following the remarks in the hearing phase on the interpretation of Article 38(5) of the EB Regulation as reflected in recitals (48) to (50), ACER did not deem it necessary to amend the Proposal. The text of Annex I concisely reflects the requirements following from the EB Regulation to only allow allocation of cross zonal capacity to the exchange of balancing capacity when this cross zonal capacity is calculated in accordance with relevant capacity calculation methodologies. ACER amended Annex I Article 4 and 5 to clarify that the day-ahead capacity calculation methodology is the one relevant for this methodology.

The electricity directive (2019/944)

Pursuant to Article 59(1)(b) in the Electricity Market Directive (Directive 2019/944) the CCR Nordic NRAs have the duty to ensure the compliance with ACER decisions addressed to “their TSOs”.

Article 59 Duties and powers of the regulatory authorities

*1. The regulatory authority shall have the following duties:
(b) ensuring the compliance of transmission system operators and distribution system operators and, where relevant, system owners, as well as the compliance of any electricity undertakings and other market participants, with their obligations under this Directive, Regulation (EU) 2019/943, the network codes and the guidelines adopted pursuant to Articles 59, 60 and 61 of Regulation (EU) 2019/943, and other relevant Union law, including as regards cross-border issues, as well as with ACER's decisions.*

Agreement of 14 October 2020 by all Regulatory Authorities of CCR Nordic on the implementation of a final checkpoint for go-live of CCR Nordic flow based capacity calculation methodology as approved pursuant to Article 20 of Commission Regulation (EU) 2015/1222 of 24 July 2015 establishing a Guideline on Capacity Allocation and Congestion Management¹¹

¹¹ Afgørelse om ændret metode for kapacitetsberegning i CCR Nordic (1) (forsyningstilsynet.dk)

The NRAs of CCR Nordic have on 14 October 2020 reached an agreement, a side-letter, that the TSOs' CCM Proposal meets the overall requirements of Regulation 2015/1222, i.e. CACM. The side-letter contains a number of amendments to the CCR Nordic CCM FB position paper that were approved nationally together with the capacity calculation methodology. "The amendments install a final checkpoint for go-live of the flow-based CCM. The checkpoint regards go-live of CCM FB, i.e. the actual allocation of flows according to the implementation of the CCR Nordic FB CCM.

Presumably the NRAs emphasize stakeholder consultation, as the allocation of flows according to the Nordic CCM FB will have a not non-substantial impact on flows in the Nordic power system.

Pursuant to the side-letter to the CCR Nordic position paper, the NRAs are only required to issue an opinion if KPIs are not met, i.e. that the implementation of FB is not working well enough. Also the NRAs have only one month to issue an opinion.

We (the NRAs ed.) will prepare, agree and publish a joint opinion latest one month after receiving the evaluation report in case the report and the subsequent analysis shows that the criteria have not been sufficiently fulfilled. If, however, we find that the approved methodology and the operational implementation of it are working well enough, the TSOs will be allowed to perform the remaining and final 6 months of parallel runs without further changes before go-live.

Selected parts of the side-letter are included in the following.

Amendments are introducing a final checkpoint for go-live

At the checkpoint the Nordic CCR NRAs will commonly assess the functionality and efficiency of the methodology based on a TSOs' evaluation report, also involving stakeholder consultation, delivered by the Nordic CCR TSOs earliest 5 months after the start of the parallel runs. The purpose of this assessment, "the checkpoint", is to determine whether the approved methodology, including the operational implementation of it, is ready to start the final six months of parallel runs and eventually go live. If the Nordic CCR NRAs commonly were to consider the methodology not to be functioning well enough, the go-live of the methodology will have to be postponed while the methodology is amended or the operational implementation of it undergoes revisions.

The assessment of the methodology shall be based on the TSOs' evaluation report and the criteria outlined below. We (the NRAs ed.) will prepare, agree and publish a joint

opinion latest one month after receiving the evaluation report in case the report and the subsequent analysis shows that the criteria have not been sufficiently fulfilled. If, however, we find that the approved methodology and the operational implementation of it are working well enough, the TSOs will be allowed to perform the remaining and final 6 months of parallel runs without further changes before go-live.

In case the assessment shows that the methodology and/or operations linked to the calculation of capacities, are not working sufficiently well, we will request the Nordic TSOs to improve the operational implementation of the methodology and/or request the TSOs to amend the methodology itself. While doing so, the time of parallel runs is extended. The choice of whether the TSOs are required to amend the methodology and/or improve the operational implementation depends on where potential shortcomings occur, and the decision for either of the choices or both shall be a joint decision by us.

In the case of either of the possible requests, we also agree to require the TSOs to prolong the parallel run period. (...)

The agreement also contains assessment criteria for the TSOs' evaluation reports, which are included in the following for reference.

Criteria for the assessment

The NRAs will assess the functionality and the efficiency of the methodology using the following criteria:

Use of fallback measures:

- *Fallback measures (as described in art 22 of the methodology) should be used in less than 3 % of MTU covered in the report to consider the methodology to operate sufficiently well concerning this criterion.*
- *NRAs shall assess the reasons for TSOs use of fallback measures based on the analysis and explanations received from the TSOs.*

Structural delays:

- *The delivery of flowbased parameters by the CCC to the ENTSO-E transparency platform in accordance with Transparency Regulation ((EU) 543/2013) is delayed for 2-10 minutes in less than 5 % of the MTUs in the time period covered in the TSOs' report. Any delay exceeding 10 minutes is not acceptable*

- *The publication of flowbased parameters to stakeholders is delayed for 2-10 minutes in less than 5 % of the MTUs in the time period covered in the TSOs' report. Any delay exceeding 10 minutes is not acceptable.*

Socioeconomic welfare:

We acknowledge that one of the purposes of introducing a new methodology for capacity calculation, according to CACM GL, is to provide welfare benefits to society. Thus, comparing the socioeconomic welfare of the current NTC methodology to the estimated results from using the new methodology, is an indicator to capture potential shortcomings in the implementation of the new methodology. However, we note that this comparison cannot be performed with perfect precision, partly due to the two methodologies operating at different levels of operational security. We will therefore need to broaden our analysis to include more parameters than just the net difference in socioeconomic welfare. If deviations to the expected outcome of improved socioeconomic welfare with the new methodology compared to NTC occur in the period covered in the TSOs report, the NRAs shall analyse the reasons for the outcome not being in line with expectations based on the analysis and explanations received from the TSOs.

Effect on intraday market:

The transition to the flowbased calculation methodology for the day-ahead timeframe will have impacts also on the intraday timeframe and trading. It is clear that if more capacity is used in the day-ahead market in one direction, then less capacity will usually be available in the same direction in the intraday market. However, the impact of allocated flows in the dayahead market on the available capacities in intraday needs to be looked at. The worrying point for us would be if there were less intraday capacity in both directions on a bidding zone border, when flowbased is used in the day-ahead market. We will assess the effect to ID markets based on the available data and TSOs' report.

Stakeholder feedback:

The TSOs' report will include stakeholder input and/or comments on the time period and data covered and analysed in the report, which should be taken into account when we assess the report.

At the NRA/TSO NBM Coordination Group meeting on 26. August 2020, the TSOs asked for guidance on two aspects relating to the go live of the Nordic aFRR CM following the ACER decisions on that market from 5 August 2020 (ACER Decisions 19-22/2020). The TSOs asked for guidance on the implications of Article 38(5) of the EB Regulation in light of ACER's decisions and on the interrelationship between the articles on implementation in the methodologies approved by ACER' decisions.

Pursuant to the NRA guidance, it is possible to establish the following points regarding, how the NRAs interpret Article 38(5) in EBGL with regard to the go-live of the Nordic aFRR CM, i.e. that allocation of balancing capacity is only allowed when cross-zonal capacity in a capacity calculation region is calculated in a harmonised way compliant with the Nordic CCR CCM FB.

Firstly, the NRAs acknowledge that there are considerable social welfare gains to be harvested from an implementation of a Nordic aFRR capacity market as soon as possible.

Secondly, the guidance establishes that the common grid model must be in place; the CCR Nordic FB CCM must deliver appropriate capacity calculation results and that an evaluation report must contain data covering at least 3 consecutive months of external parallel runs.

Thirdly, the Nordic CCR NRAs will aim at assessing the report as soon as possible after receiving the evaluation report from Nordic TSOs (within 1 month) by preparing a joint opinion based on the assessment. It is not clear if the joint opinion also will be issued as national decisions thus giving concerned parties the option to file a complaint.

The timeline indicated by the NRAs is most likely to be understood in connection with the side-letter, thus implying that the NRAs will only issue a joint opinion provided that the CCM FB is not working sufficiently well to calculate cross-zonal capacities.

Fourthly, the TSOs should submit an evaluation report, i.e. the requirement in the side-letter regarding go-live of FB CCM. The NRAs however recognize that the report could serve two different purposes, by also serving as a basis for demonstrating that the condition in the methodology pursuant to Article 38(1) in the EB Regulation is fulfilled. "The NRAs may, to the extent considered relevant, and based on the relevant information available at that point, make independent assessments with respect to the two purposes." It follows from this that the NRAs are inclined to make two independent assessments with respect to calculation (aFRR CM go-live) and allocation (FB allocation go-live). It follows

from this that NRAs can conclude that data from the external parallel runs shows that the FB CCM is sufficiently well running for go-live of aFRR CM, but not for go-live of FB CCM.

Selected sections from the guidance letter are included below: The NRA guidance on Article 38(5) reads.

As the Nordic CCR NRAs understand it, the TSOs question on Article 38(5) in the EB Regulation relates to the methodology annexed to ACER's decision pursuant to Article 38(1).

Recital 45 of the decision pursuant to EB Regulation Article 38(1), deals with Article 38(5) in the EB Regulation and reads:

ACER understands that this requirement ensures that allocation of cross zonal capacity for the exchange of balancing capacity is only allowed when cross-zonal capacity in a capacity calculation region is calculated in a harmonised way compliant with the capacity calculation methods developed pursuant to the respective regulations. As this methodology intends to apply the market-based methodology in the period just before the day-ahead market timeframe, the calculation pursuant to the capacity calculation methodology for the day-ahead market is considered to be the most relevant.

This reading is implemented in Article 5(2) in the methodology annexed to ACER's decision pursuant to EB Regulation Article 38(1). Article 5(2) reads:

The TSOs shall implement this methodology no later than 12 months after a decision has been made by [ACER] but only when the cross zonal capacity on all bidding zone borders of the Nordic CCR is calculated in accordance with the capacity calculation methodologies developed pursuant to the CACM Regulation.

At the meeting on 26 August 2020 and in material from TSOs sent to the Nordic NRAs on 31 August 2020, the TSOs have argued that they can implement the aFRR capacity market with cross-zonal capacity reservations when day-ahead cross-zonal capacities are calculated in accordance with the CACM Regulation, i.e.

- *Flow-based CCM is applied in the day-ahead timeframe;*

- *The Nordic RCC will calculate cross-zonal capacity in D-1 for each day-ahead market time unit applying the Nordic CGM;*
- *The Nordic RCC will publish the results of the calculation (matrices, RAMs) each day.*

The TSOs have argued that these requirements will be fulfilled when external parallel runs of the Nordic CCM project start in the day-ahead timeframe. The TSOs have justified their approach by pointing out that the ACER decision referred to above requires them to calculate capacity according to the Nordic CCM, not to allocate it.

The Nordic CCR NRAs acknowledge that there are considerable social welfare gains to be harvested from an implementation of a Nordic aFRR capacity market as soon as possible. The methodologies as approved by ACER following a unanimous favourable opinion at the Board of Regulators are to be seen in this context.

The Nordic CCR NRAs advise TSOs to prioritise the implementation of flow based, due to the above mentioned link in the methodology pursuant to the EB Regulation Article 38(1) between the start of the implementation of the methodology and the calculation of cross-zonal capacity on all bidding zone borders of the Nordic CCR in accordance with the CCM developed pursuant to the CACM Regulation.

That said, the Nordic CCR NRAs find that key to the interpretation is when the condition in the methodology pursuant to EBGL Article 38(1) can be considered fulfilled.

Firstly, the CGM needs to be in place. Only then the TSOs are in fact able to calculate capacity according to the Nordic CCM as it is this capacity that can be allocated cross-zonally. TSOs thus need to demonstrate that they have done their tasks in this regard.

Secondly, the Nordic CCM must deliver appropriate capacity calculation results. This will be demonstrated during the external parallel runs.

The Nordic CCR NRAs note that it follows from Article 20(8) in the CACM Regulation that the parallel runs are to last at least 6 months, while in the CCM for CCR Nordic, minimum 12 months are required. The Nordic CCR NRAs thus find that this demonstration by the TSOs can be made by submitting an evaluation report containing data covering at least 3 consecutive months of external parallel runs.

The Nordic CCR NRAs will aim at assessing the report as soon as possible after receiving the evaluation report from Nordic TSOs (within 1 month) by preparing a joint opinion based on the assessment of the evaluation report. If the conclusion is that the Nordic TSOs have adequately demonstrated they can calculate capacities, then the above mentioned requirement in ACER's Decision, Article 5(2) in the methodology pursuant to Article 38(1) in the EB Regulation could be considered to be fulfilled as regards a go live of the aFRR capacity market.

The specific requirement to submit an evaluation report to the Nordic CCR NRAs follows also from the Nordic CCR NRAs' agreement on the 14 October 2020 to amend the TSOs' CCM proposal of 17 April 2020. The evaluation report aims at providing the Nordic CCR NRAs with a basis for assessing the functioning of the FB CCM during the implementation phase. In that respect, the TSOs' evaluation report could serve two different purposes, by also serving as a basis for demonstrating that the condition in the methodology pursuant to Article 38(1) in the EB Regulation is fulfilled. The NRAs may, to the extent considered relevant, and based on the relevant information available at that point, make independent assessments with respect to the two purposes.

Already now, the Nordic CCR NRAs can advise TSOs that in relation to the go live of the aFRR capacity market, the purpose of the NRA assessment of the TSOs' evaluation report, is to ensure that TSOs can actually calculate capacities in accordance with Nordic CCM developed pursuant to the CACM Regulation and thus that the condition in Article 5(2) in the methodology pursuant to Article 38(1) in the EB Regulation is fulfilled by TSOs, i.e. TSO's have fulfilled the tasks that are theirs in the capacity calculation, rather than the tasks of NEMOs, prior to go-live of the Nordic aFRR capacity market.